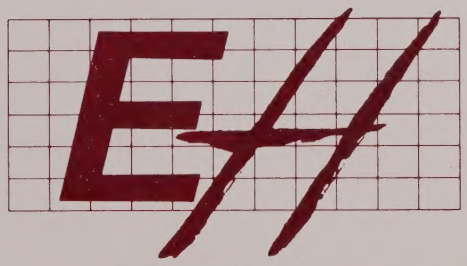
MODEL

1560/1564

PULSE GENERATOR

TECHNICAL MANUAL

F-16 #7 E-H Electronics
Model 1560/1564 Pulse Generator Tech.



ELECTRONICS
a Division of
E-H International, Inc.
7303 Edgewater Drive
Oakland, CA 94621
Ph: 415/638-5656
TWX: 910-366-7258

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No

WHERE USED

INDEX [X] ASSEMBLY [ ] SPEC. ASSEM. [ ]

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ASSEMBLY NO. 1560

COPY DATE 3-31-81

DESCRIPTION PROGRAMMABLE PULSE GENERATOR

E.C.O. 82-036

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	146-30397	DISPLAY & KEYBOARD ASSY		1	A				
B									
C	249-30329	INTERFACE REAR SUBPANEL							
D		ASSEMBLY		1	A				
E									
F	251-30335	FRONT PANEL ASSEMBLY		1	A				
G									
H	**253-21287	REAR PANEL ASSEMBLY		1	A				
I									
J	**255-30557	CHASSIS ASSEMBLY		1	A				
K									
L	**257-21289	SIDE PANEL ASSEMBLY		1	A				
M									
N	*261-21685	FRAME ASSEMBLY		1	A				
O									
P	*350-21711	RACK MT. COMPLETION KIT		1	A				
Q									
R	**401-22619	SERIAL D/A CONV P.C. ASSY	A305-307, 311-314	7	A				
S									
T	**401-28806	DELAY & WIDTH P.C. ASSY	A302	1	A				

DRWN _____

CHKD _____

APPD _____

*S/A File

**1500 File

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED

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ASSEMBLY NO. 1560

COPY DATE 3-31-81

DESCRIPTION PROGRAMMABLE PULSE GENERATOR

E.C.O. 82-023

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	**401-29639	P/S REGULATOR P.C. ASSY	A310	1	A				
B									
C	**401-30139	100 MHz CLOCK P.C. ASSY	A301	1	A				
D									
E	401-30217	PROCESSOR P.C. ASSEMBLY	A309	1	A				
F									
G	401-30220	INTERFACE P.C. ASSEMBLY	A308	1	A				
H									
I	**401-29660	OUTPUT BOARD ASSEMBLY	A303	1	A				
J									
K	820-30367	STANDARD ACCESSORIES		1	A				
L									
M	821-30368	OPTIONAL ACCESSORIES		OPT	A				
N									
O	822-30369	MODIFICATION OPTIONS LIST		OPT	A				
P									
Q	**825-30456	COMPLETION MATERIALS		1	A				
R									
S									
T									

*S/A File
**1500 File

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC No

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ASSEMBLY NO. 146-30397

DESCRIPTION DISPLAY & KEYBOARD P,C. ASSY

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COPY DATE 3-31-81

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ILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

TEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	402-30223	Display P.C. Assembly		1					
B	402-30281	Keyboard P.C. Assembly		1					
C	140-30224	Schem, Display & Keyboard	Prod Ref						
D									
E	706-00005	Cable, 14 Cond. Jumper 3"		1					
F									
G									
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC No.

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ASSEMBLY NO. 402-30223

DESCRIPTION DISPLAY P.C. ASSEMBLY

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E.C.O. 83-005

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	400-30222	P.C. Board		1					
B	402-30223	Assembly Drawing	Prod Ref						
C	140-30224	Schem, Display & Keyboard	Prod Ref						
D									
E	311-00041	Cap, Cerm, .1µf, 12V	C2-C17	16					
F									
G	318-00009	Cap, Tant, 15µf, 20V	C1	1					
H									
I	475-00070	Spacer, LED, .250	(DS222-226)	5					
J	475-30343	Spacer Display	(DS201-221)	1					
K									
L	510-00028	LED	DS222-226	5					
M									
N	521-00027	Display, DL44	DS201-221	21					
O									
P	595-00102	Resistor, 1K, ¼W, 5%	R1	1					
Q									
R	589-00473	Res Ntwk, 47K, 10 pin SIP Comm.	RP5	1					
S	589-00331	Res Ntwk, 330Ω, 10 pin SIP Comm.	RP3-4,6	5					
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC No.

WHERE USED

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(1560)

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ASSEMBLY NO. 402-30223

DESCRIPTION DISPLAY P.C. ASSEMBLY

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COPY DATE 3-31-81

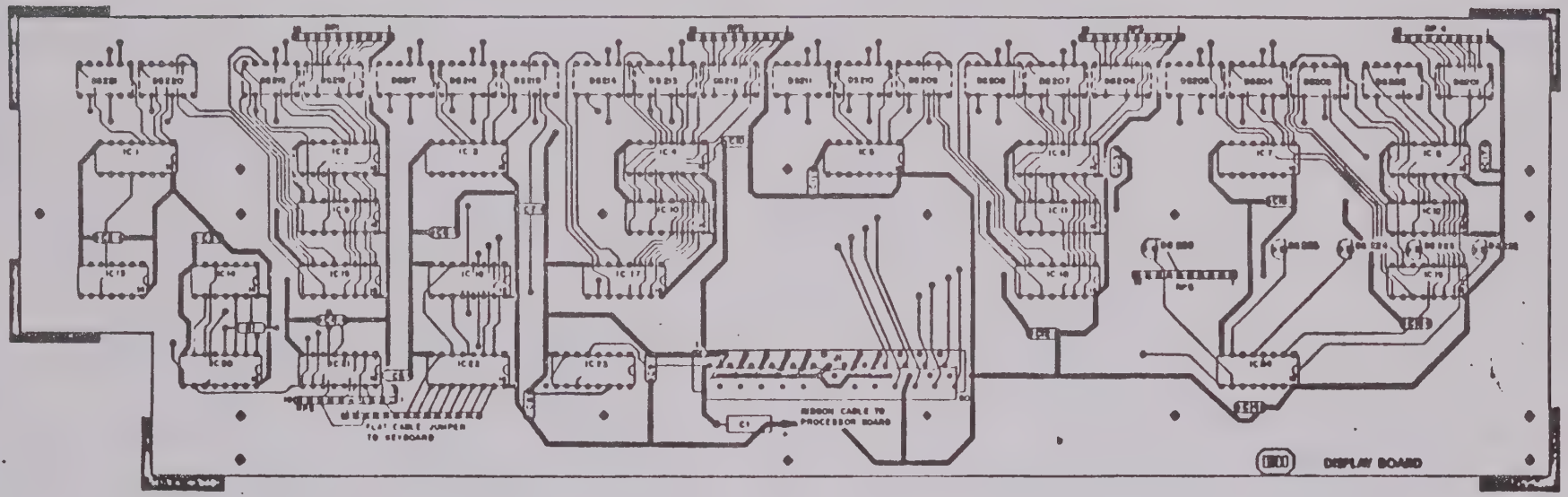
E.C.O.

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	665-00190	IC, 7408	IC14	1					
B	665-00284	IC, 7445	IC1-8	8					
C	665-00334	IC, 74LS04	IC13	1					
D	665-00340	IC, 74LS174	IC24	1					
E	665-00369	IC, 74LS138	IC16,22	2					
F	665-00423	IC, 74LS193	IC20,23	2					
G	665-00443	IC, 74LS151	IC21	1					
H	665-00528	IC, 27S02/3101	IC9-12,15, 17-19	8					
I									
J	706-30344	Cable Assembly, Display	A309P1	1	A				
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

REVISIONS					
A	ORIGINAL RELEASE				
B					

COMPONENT SIDE E-H 400-30222D MODEL NO. 1560



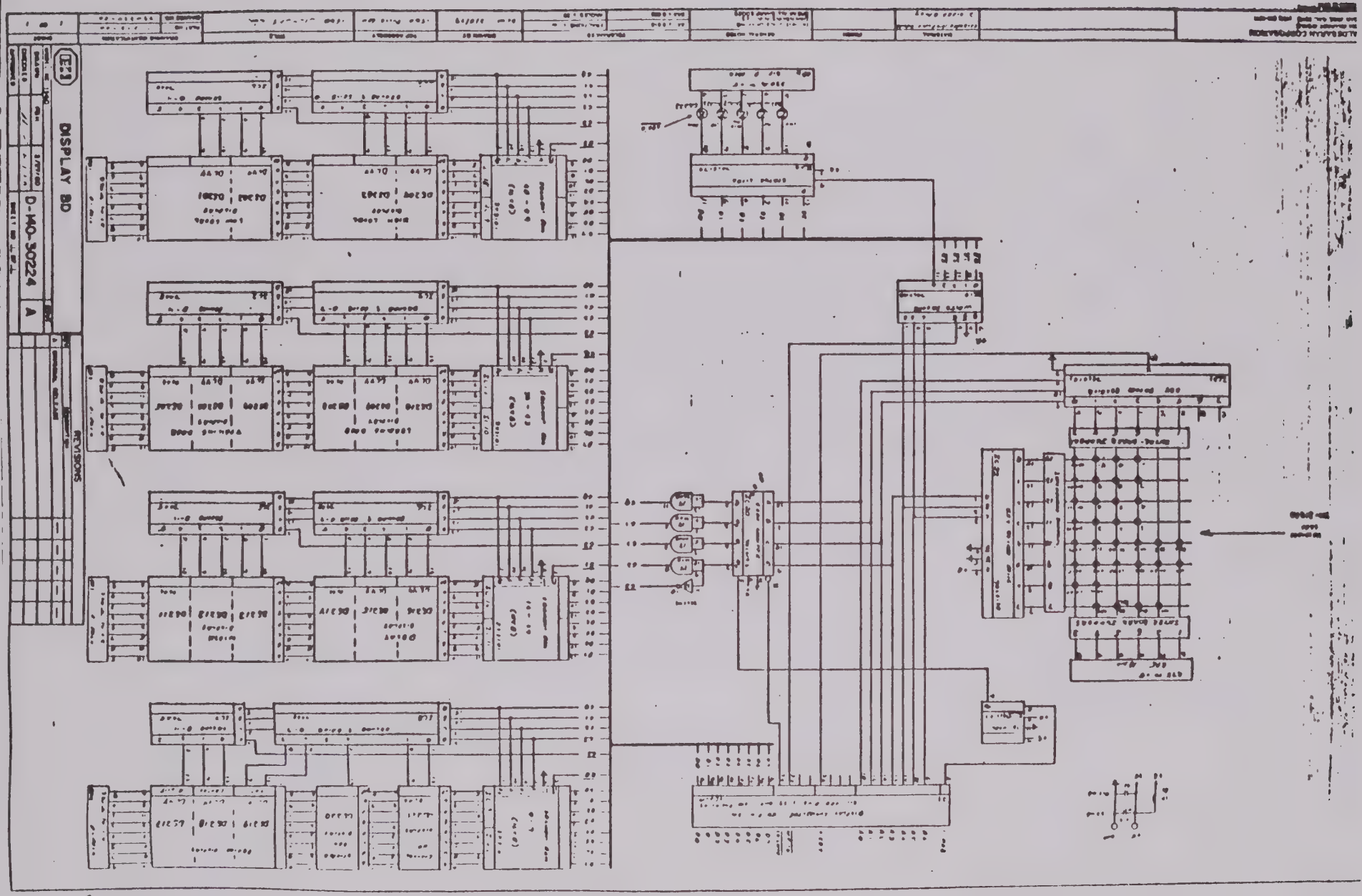
NOTE
D0 201-221 INSTALLED WITH SPACER 475-30343 ON P18 SIDE
D0 222-240 INSTALLED WITH SPACER 475-00070 ON P18 SIDE (8 PLACES)

REF. DWG'S

1. SCHEMATIC DWG 140-30224
2. PARTS LIST DWG. 400-30238

ARTWORK REV'D'

DISPLAY BOARD ASSEMBLY			
DRAWN	PBH	7 80	D-402-30223 B
CHECKED			
APPROVED			SHEET NO 1 OF 1


DISPLAY BD
D-MO-30224
A

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No

WHERE USED

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(1560)

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ASSEMBLY NO. 402-30281

E.C.O.

DESCRIPTION KEYBOARD P.C. ASSEMBLY

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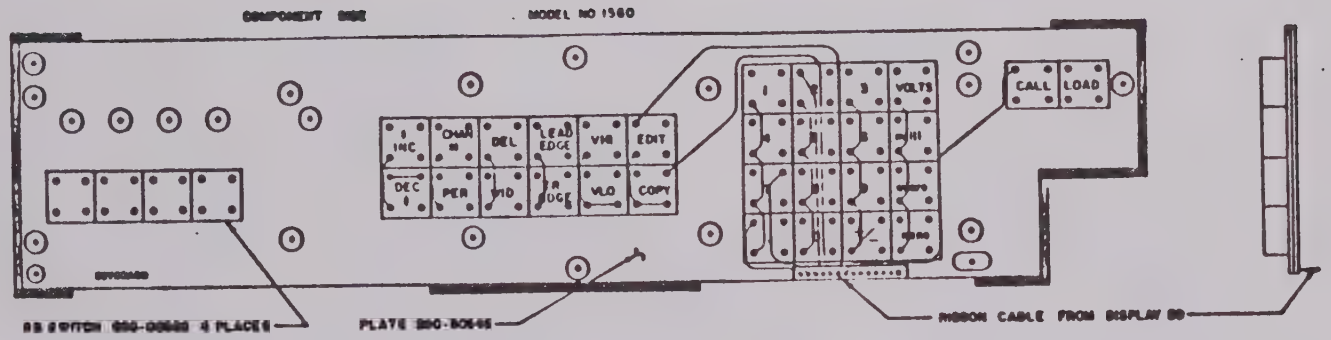
ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	400-30280	P.C. Board		1					
B	402-30281	Assembly Drawing	Prod Ref						
C	140-30224	Schematic,Display & Keybd.	Prod Ref						
D									
E	280-30345	Plate, Switch Alignment		1					
F									
G	635-00028	P.B. Switch, 5/8 Sq.		4					
H	635-30346	P.B. Switch Set, 1560 Prog.		1	A				
I	*635-42162	P.B. Switch Set, "0"-"9"		1	A				
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T.									

*S/A File

REVISIONS						
A	ORIGINAL RELEASE	—	—	—	—	—



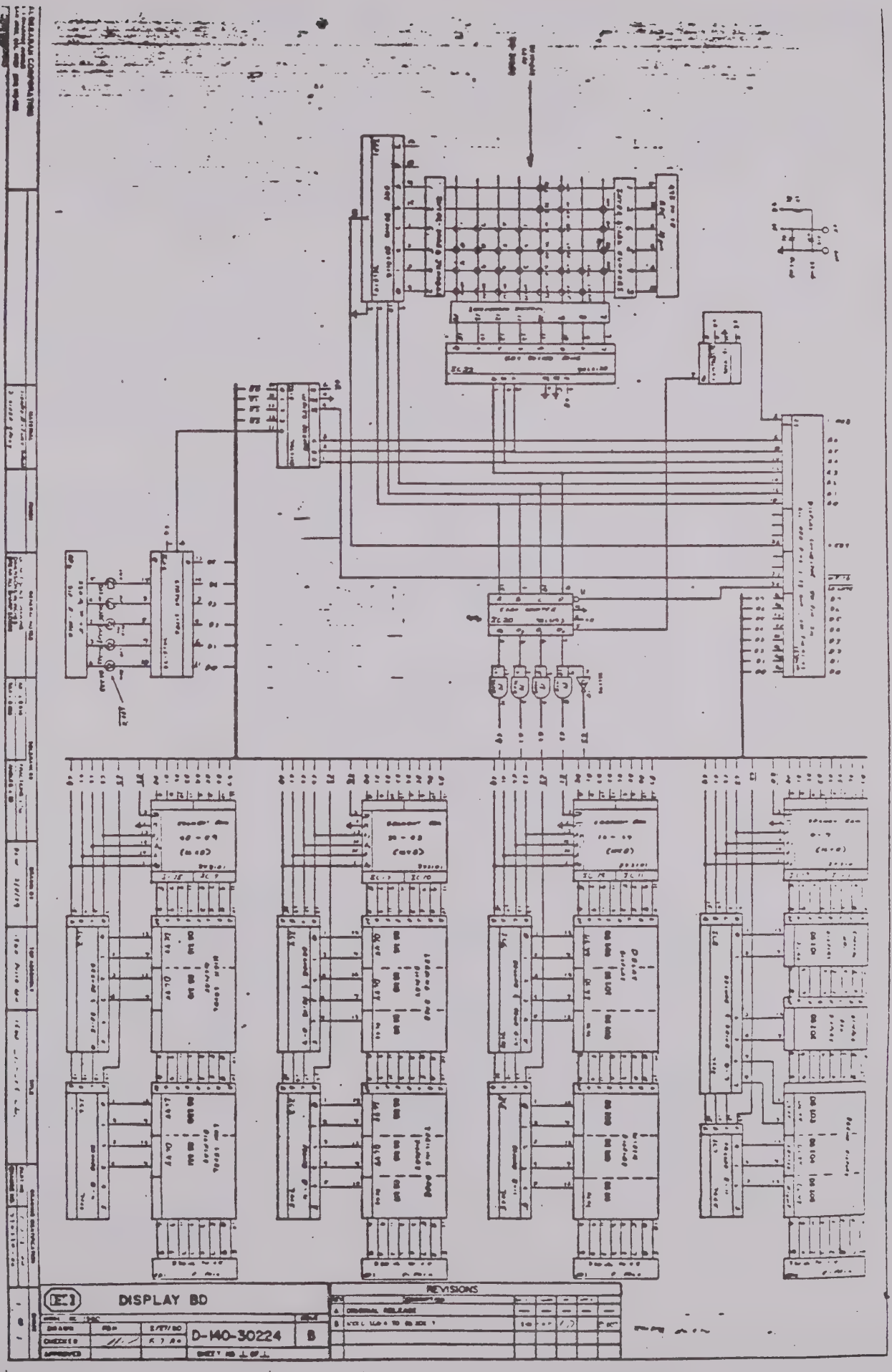
NOTE:
1. P.B. SWITCH SET 0-9 535-42108
2. P.B. SWITCH SET 1560 PROG 535-30546

REF. DWG'S

1. SCHEMATIC DWG: 140-30224
2. FAB (SPEC) DWG: 400-30280

ARTWORK REV C

ECI	1560 KEYBOARD ASSY. DWG.			
MODEL NO				ISSUE
DRAWN	PBH	7 23 80	C-402-30281	A
CHECKED		7 24 80		
APPROVED			SHEET NO 1 OF 1	



DISPLAY BD

D-140-30224

B

JOB NO	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC No

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ASSEMBLY NO. 249-30329

E.C.O.

DESCRIPTION INTERFACE SUBPANEL ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	248-30330	Subpanel		1					
B	144-30331	Silkscreen	Prod Ref						
C									
D	706-30332	Cable Assembly, GPIB	J112/A308P1	1	A				
E	706-30333	Cable Assembly, RS232	J111/A308P2	1	A				
F	**706-30311	Cable Assy, Program Output	J110/A309P2	1	A				
G									
H	624-00063	Switch Cover, 5 Pos		1					
I									
J	700-00337	Slidelock Post	(J111)	2					
K	700-30395	Jacksocket	(J110,J112)	4					
L									
M		- HARDWARE -							
N	202-00311	Screw, 4-40x5/16PHMS s.s. (4)	Prod Ref						
O	215-00053	Washer, #10 Splitlock (4)	Prod Ref						
P	240-00010	Nut, 8-32 Sm. Pattern (4)	Prod Ref						
Q	240-00001	Kepnut, 4-40 (4)	Prod Ref						
R	202-00302	Screw, 4-40x½ FHMS s.s. (2)	Prod Ref						
S									
T									

**1500 File

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 251-30335

E.C.O. 82-036

DESCRIPTION FRONT PANEL ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	250-30336	Front Panel Sub Assembly		1	A				
B									
C*	706-28935	Power Switch Cable Assy	S201/DS201	1	A				
D	702-28936	Wirelist, Pwr. Sw. Install.	Prod Ref						
E		- HARDWARE -							
F	203-00066	Screw, 6-32x5/16OHMS Blk(6)	Prod Ref						
G									
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

*1500 Multi

JOB NO.	ASSEMBLIES REQ'D.	COST CENTER	DATE

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ASSEMBLY NO. 253-21287

DESCRIPTION REAR PANEL ASSEMBLY

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77-007
78-041
80-016

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM.	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	252-22731	Panel, Rear		1					
B	144-22732	Silkscreen	Prod Ref						
C									
D	248-22734	Panel, Sub, BNC Conn. Transition		1					
E	396-00009	Fuse Holder	F101	1					
F	398-00003	Fuse 3 Amp S.B.	F101	1					
G	570-00008	Fan	B101	1					
H	570-00009	Grill		1					
I	700-00204	Receptacle, AC	J101	1					
J									
K	721-00013	Connector, BNC	J102-J107	6					
L									
M		-HARDWARE-							
N	202-00311	Screw, 4-40x5/16 lg BHMS (10) Phil Dr.	Prod Ref						
O	203-00313	Screw 6-32x5/16 BHMS (10)	Prod Ref						
P	204-00008	Screw, 8-32x5/8 Lg BHMS (4)	Prod Ref						
Q	240-00001	#4-40 Kep Nut (2)	Prod Ref						
R	240-00003	#8-32 Kep Nut (4)	Prod Ref						
S	240-00002	#6-32 Kep Nut (4)	Prod Ref						
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 255-30557

DESCRIPTION CHASSIS ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	254-30491	Chassis		1					
B	144-30492	Silkscreen, Chassis Top	Prod Ref						
C	144-30493	Silkscreen, Chassis Bottom	Prod Ref						
D									
E	258-28916	Cover, Terminal Strip	(TB301)	1					
F	311-00028	Cap, Cerm, 200pf, 1KV	C307	1					
G	316-00073	Cap, El., 5500µf, 40V	C301-304	4					
H	316-00088	Cap, El., 17000µf, 40V	C305	1					
I									
J	376-00066	Diode, 368B	CR301,302	2					
K									
L	396-00301	Fuse Holder	XF301	1					
M									
N	398-00034	Fuse, 8 Amp Inst.	F301	1					
O									
P	405-00005	Clamp, Cap	(C301-304)	4					
Q	405-00007	Clamp, Cap	(C305)	1					
R									
S**	481-28918	Terminal Board Assembly	TB302	1	A				
T									

**1500 Series

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 255-30557

DESCRIPTION CHASSIS ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	484-00023	Terminal Strip, Jumper	(TB301)	2					
B	484-00054	Terminal Strip	TB301	1					
C	484-00053	Terminal Marker Strip		1					
D	484-00082	Card Guide		23					
E	484-00027	Terminal, Barrier Strip	(TB301)	2					
F			—						
G									
H	490-00001	Transistor Mtg. Kit	XQ301-305 XIC301	6					
I									
J	597-00102	Resistor, 1K, 1W, 5%	R302,304	2					
K	597-00152	Resistor, 1.5K, 1W, 5%	R301,303	2					
L									
M	598-00151	Resistor, 150Ω, 2W, 5%	R305	1					
N									
O	650-19604	Transformer, Power	T301	1					
P									
Q	663-00073	Transistor, 2N3055	Q301-304	4					
R	663-00115	Transistor, MJ4502	Q305	1					
S									
T	665-00074	IC, LM309K	IC301	1					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 255-30557

DESCRIPTION CHASSIS ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	702-30497	Wirelist, Cable Harness	Prod Ref						
B	**702-30496	Cable Harness Assy, Chassis		1	A				
C	702-30498	Wirelist, Bussing	Prod Ref						
D	702-30499	Wirelist, XFMR & Component	Prod Ref						
E	702-28926	Wirelist, AC Pwr & XFMR	Prod Ref						
F	702-30556	Wirelist, Coax	Prod Ref						
G									
H	**704-23139	Signal Input (Output Bd.) Coax Cable Assy, Red		1	A				
I	**704-23140	Signal Input (Output Bd.) Coax Cable Assy, Orn.		1	A				
J									
K	**708-30652	Delay Line Assy, 23ns	DL301	1	A				
L									
M	743-00011	Connector, PCB 22 Pin Dual	A301B,C A302A,B,C						
N			A303A,B,C A305-307						
O			A308A,B A309A,B						
P			A310-314	20					
Q									
R		-HARDWARE-							
S	202-00104	Screw, 4-40x¼ BHMS (2)	Prod Ref						
T	202-00108	Screw, 4-40x⅛ BHMS (40)	Prod Ref						

**1500 Series

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 255-30557

DESCRIPTION CHASSIS ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	202-00205	Screw, 4-40x5/16 FLTHMS (12)	Prod Ref						
B									
C	203-00103	Screw, 6-32x3/16 BHMS (2)	Prod Ref						
D	203-00106	Screw, 6-32x3/8 BHMS (1)	Prod Ref						
E	203-00015	Screw, #6 x ½ Type F (8)	Prod Ref						
F	203-00208	Screw, 6-32x¾ FLTHMS (4)	Prod Ref						
G	203-00105	Screw, 6-32x5/16 BHMS (9)	Prod Ref						
H	203-00107	Screw, 6-32x7/16 BHMS (23)	Prod Ref						
I									
J	205-00001	Screw, 10-32x½ RHMS (6)	Prod Ref						
K	205-00106	Screw, 10-32x3/8 BHMS (4)	Prod Ref						
L									
M	215-00010	Washer, Flat #10 (2)	Prod Ref						
N	215-00030	Washer, TFE #8 (12)	Prod Ref						
O	215-00038	Washer, TFE #10 (2)	Prod Ref						
P									
Q	240-00002	Kepnut, #6-32 (12)	Prod Ref						
R	240-00004	Kepnut, #10-32 (6)	Prod Ref						
S	240-00006	Kepnut, #4-40 (1)	Prod Ref						
T	240-00026	Lock Nut W/Nylon Insert #4-40 (52)	Prod Ref						

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

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ASSEMBLY NO. 255-30557

DESCRIPTION CHASSIS ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	240-00042	Nut, 6-32,5/16 Square (23)	Prod Ref						
B									
C	420-00008	Grommet, 5/8 (5)	Prod Ref						
D	460-00016	Lug, Locking #4 (2)	Prod Ref						
E	460-00301	Lug, #10 (3)	Prod Ref						
F	460-00302	Lug, Locking, #10 (10)	Prod Ref						
G									
H	475-00302	Lug, Locking #6 (1)	Prod Ref						
I									
J	500-00002	Insulator, Mica (4)	Prod Ref						
K	500-00003	Insulator, Mica, TO-3 (6)	Prod Ref						
L									
M									
N									
O									
P									
Q									
R									
S									
T									

JOB NO.	ASSEMBLIES REQ'D.	COST CENTER	DATE

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1500 Series

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ASSEMBLY NO. 257-21289

E.C.O.

DESCRIPTION SIDE PANEL ASSEMBLY

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM.	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	256-21067	Side Panel, Left		1					
B	256-21068	Side Panel, Right		1					
C									
D									
E		-HARDWARE-							
F	203-00315	Screw #6-32x5/16 100° FLTHMS (30)	Prod Ref						
G	240-00002	Kepnut #6-32 (18)	Prod Ref						
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1501A-Neuter
1501-1
7101

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE 5-5-72

E.C.O.

ASSEMBLY NO. 261-21685

DESCRIPTION 5½" X 18" FRAME ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	260-21501	Frame, Die Cast		2					
B	475-21505	Front Corner Post		2					
C	475-21514	Rear Corner Post		2					
D	425-21523	Handle		2					
E									
F									
G	276-21540	Overlay, Handle		2					
H	240-21606	Barnut		8					
I	274-21601	Spring, Cover Lift		2					
J									
K									
L									
M									
N		-HARDWARE-							
O		Screw #2-56 X 3/8 Lg (2) FHTHMS 82	Prod Ref						
P	215-00023	#4 Washer Flat X 9/32 OD (2)	"						
Q	215-00001	Lock Washer Int. #2 (2)	"						
R	205-00044	Screw #10-24 X 3/4 Lg (16) Taptite	"						
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
MULTI

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 350-21711

DESCRIPTION RACK COMPLETION KIT 5¼" x 18"

B/M PAGE

COPY DATE 5-11-72

E.C.O.

FILLED BY DATE RELEASED TO DATE

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
	262-21548	Bracket, Rack Mtg Ear		2					
B	258-21555	Cover, Top & Bottom		2					
	475-21600	Spacer, Slide Mtg		2					
E									
G									
I		-HARDWARE-							
	203-00010	Screw, 6-32x3/8 100° FLTHMS (12)	Prod Ref						
	204-00004	Screw 8-32x3/8 BHMS (12)	Prod Ref						
L	220-00041	Nutsert 8-32 (12)	Prod Ref						
N									
O									
P									
R									
S									
T									

JOB NO.	ASSEMBLIES REQ'D.	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-22619

DESCRIPTION SERIAL D/A CONVERTER BCD ASSEMBLY

B/M PAGE

COPY DATE 5-31-73

E.C.O. 74-011
76-050 82-008
77-012
78-061

ILLED BY DATE RELEASED TO DATE

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM.	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	400-22618	PC Board		1					
B	401-22619	Assembly Drawing	Prod Ref						
C	140-22620	Schematic	Prod Ref						
D									
E	311-00001	Cap, Cerm 10pf 1KV	C3	1					
F	311-00074	Cap, Cerm .01μf 100V	C2,5,6, 8,9	5					
G	318-00004	Cap, Tant 27μf 10V	C1	1					
H	318-00005	Cap, Tant 10μf 20V	C4,7	2					
I	335-00022	Choke 1.0μh	L1	1					
J	495-00054	Socket, IC 16 Pin	J1	1					
K	484-00079	Solder Terminal	TP1	1					
L	551-00035	Potentiometer 500Ω 89PR	R30	1					
M	551-00040	Potentiometer 1K 89PR	R27	1					
N	595-00100	Resistor 10Ω ¼W 5%	R28,33	2					
O	595-00153	Resistor 15K ¼W 5%	R32	1					
P	595-00165	Resistor 1.6M ¼W 5%	R11	1					
Q	595-00222	Resistor 2.2K ¼W 5%	R13-24	12					
R	595-00335	Resistor 3.3M ¼W 5%	R12	1					
S	595-00394	Resistor 390K ¼W 5%	R9	1					
T	595-00512	Resistor 5.1K ¼W 5%	R34, 35	2					

JOB NO.	ASSEMBLIES REQ'D.	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE

COPY DATE 5-31-73

ASSEMBLY NO. 401-22619

E.C.O. 74-011
77-012
78-006
78-058

DESCRIPTION SERIAL D/A CONVERTER BCD ASSEMBLY

FILED BY DATE RELEASED TO DATE

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM.	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	595-00824	Resistor 820K ¼W 5%	R10	1					
B									
C	611-00001	Resistor 4K .05%	R1	1					
D	611-00002	Resistor 8K .1%	R2	1					
E	611-00003	Resistor 16K .1%	R3	1					
F	611-00004	Resistor 32K .1%	R4	1					
G	586-01653	Resistor 165K 1/8W 1% MF	R7	1					
H	586-03163	Resistor 316K 1/8W 1% MF	R8	1					
	586-03321	Resistor 3.32K 1/8W 1% MF	R25	1					
J	586-04221	Resistor 4.22K 1/8W 1% MF	R31	1					
K	586-06191	Resistor 6.19K 1/8W 1% MF	R26	1					
L	586-09091	Resistor 9.09K 1/8W 1% MF	R29	1					
M	586-04022	Resistor 40.2K 1/8W 1% MF	R5	1					
N	586-08062	Resistor 80.6K 1/8W 1% MF	R6	1					
O									
P	663-00070	Transistor 2N3904	Q1-12	12					
Q									
R	665-00172	IC 74H01	IC 5	1					
S	665-00079	IC N5741CT	IC 8	1					
T	665-00050	IC 7402	IC 12	1					

JOB NO	ASSEMBLIES REQ'D.	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO 401-22619

DESCRIPTION SERIAL D/A CONVERTER BCD ASSEMBLY

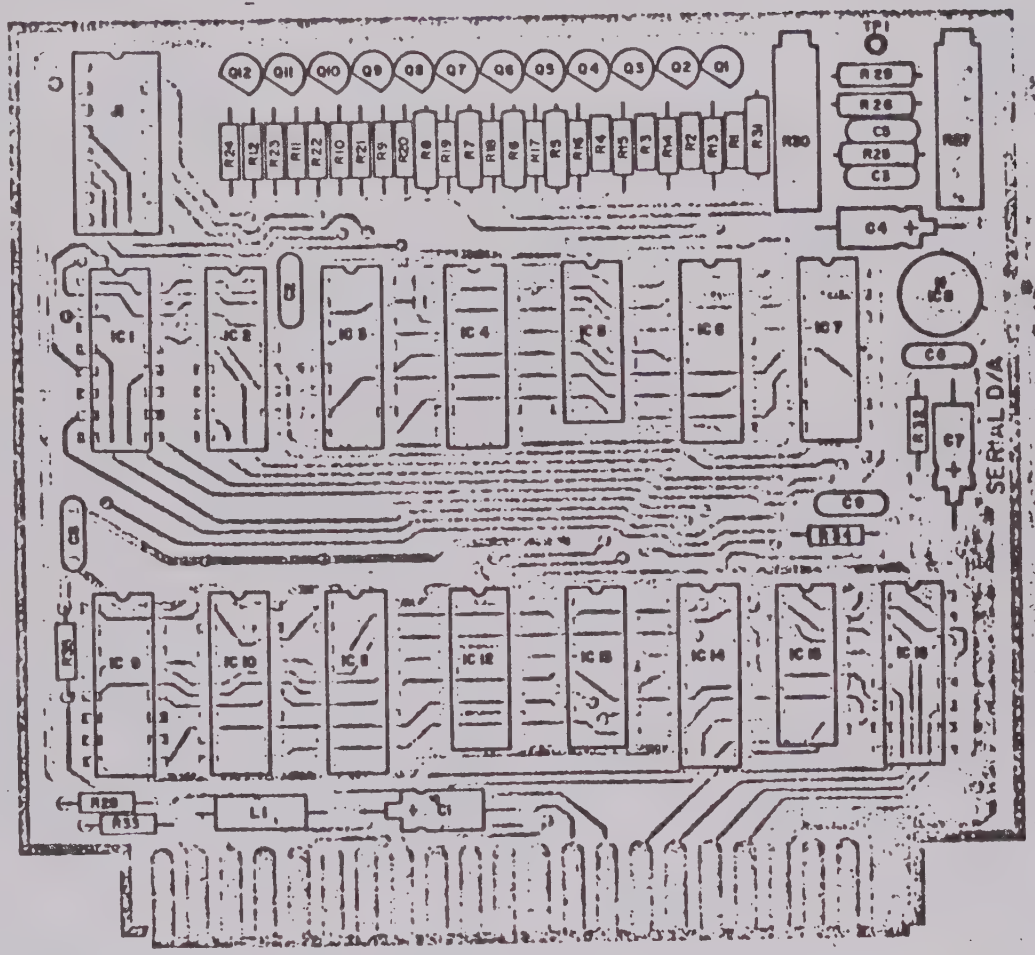
B/M PAGE

COPY DATE 5-31-73

E.C.O. 74-011
75-227
77-012
78-061

LLED BY DATE RELEASED TO DATE

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM.	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	665-00334	IC SN74LS04N	IC 13, 15	2					
B	665-00341	IC SN74LS175N	IC9-11,14	4					
C	665-00369	IC SN74LS138N	IC 4	1					
D	665-00339	IC SN74LS153N	IC 6,7	2					
E	665-00152	IC N8266B or MC7266P	IC 16	1					
F	665-00153	IC N74157B or MC74157P	IC 1-3	3					
G									
H	495-00027	Amp Pins	XIC8	8					
I	496-00043	Transistor Pad	XIC8	1					
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									



REF. DWG'S

1. BOARD OUTLINE:
2. PAB (BARE) DWG: 400-22606
3. ASS'Y DWG: 401-22619
4. SCHEMATIC DWG: 140-22620

REVISIONS

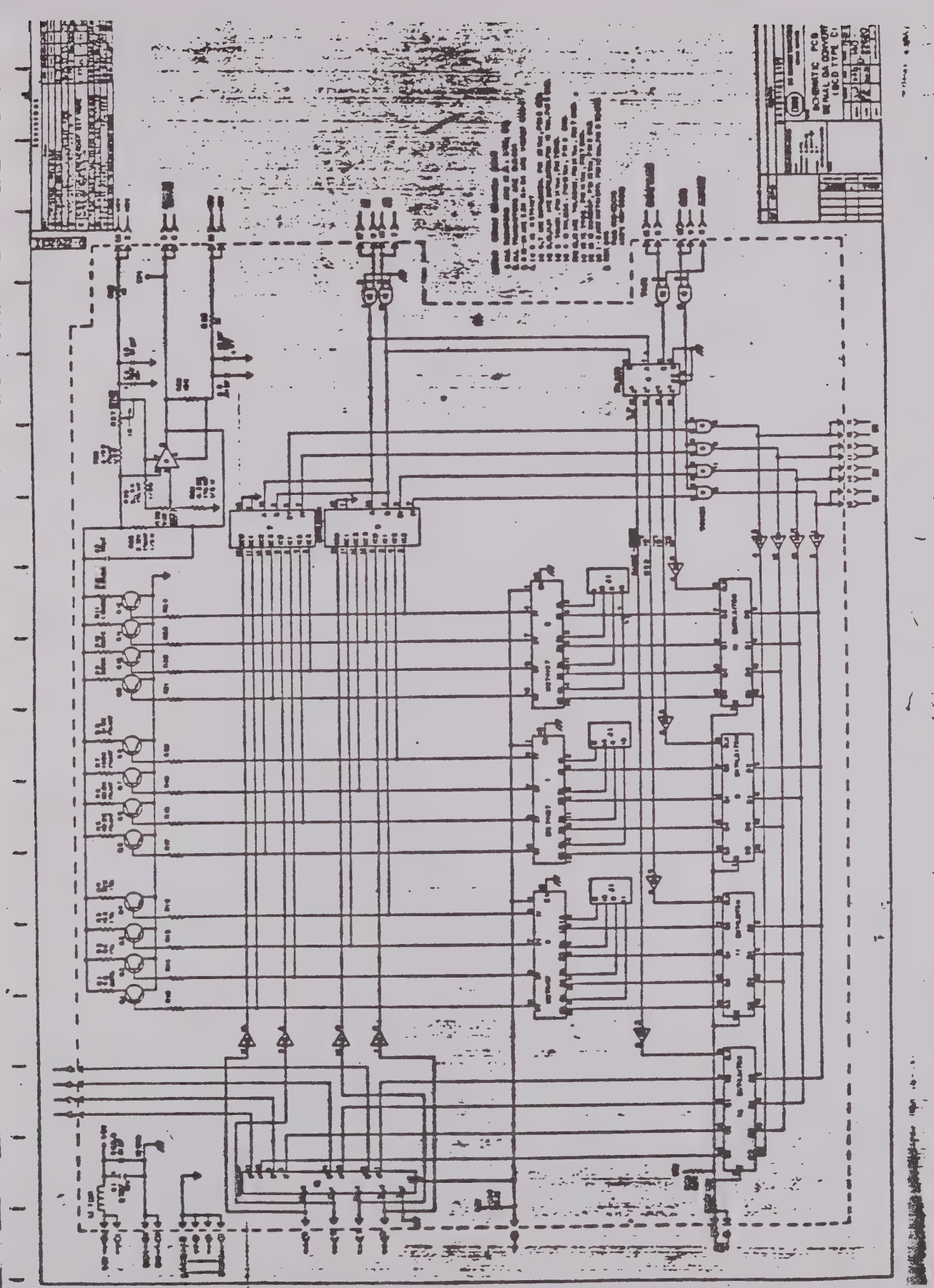
REV	DESCRIPTION					
A	ORIGINAL RELEASE	—	—	—	—	—
F	CIRCUIT REVISED, IC4 WAS MC 4002	BM	FCR		JES	11 JUN
G	ADDED TP1.	11-81				24 JUN

SCALE		
USED ON	REQ'D	NEXT ASS'Y
1501 A	7	401-22619
1504	7	"
1503	5	"
1506	0	"

ASSEMBLY DRAWING
SERIAL D/A BOARD

MODEL NO 1500 SERIES

DRAWN	DG	8-78	C-401-22619 G
CHECKED	DG	8-78	
APPROVED			SHEET NO 1 OF 1



JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-28806

DESCRIPTION DELAY & WIDTH BOARD ASSEMBLY

B/M PAGE _____

COPY DATE 8-17-77

E.C.O. 78-026 82-030
79-006
82-004

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	400-28805	PC Board		1					
B	401-28806	Assembly Drawing	Prod Ref						
C	140-28807	Schematic	Prod Ref						
D	311-00368	Cap, Cerm..05µf	C54,55	2					
E	311-00005	Cap, Cerm 30pf	C28,32,42, 47	4					
F	311-00016	Cap, Cerm .001µf	C9,25,40, 46.	4					
G	311-00028	Cap, Cerm 200pf	C27,41	2					
H	311-00034	Cap, Mono .1µf 50V	C11,13-15 17-19,22,23	9					
I	311-00035	Cap, Cerm 15pf	C56,57	2					
J	311-00041	Cap, Cerm .1µf 12V	C3-8	6					
K	311-00084	Cap, Mica 130pf 1%	C34,49	2					
L	311-00123	Cap, Mica 24pf 5%	C33,48	2					
M	312-00013	Cap, Mono .15µf Chip	C2,10,21, 30,44	5					
N	311-00094	Cap, Cerm .001µf	C31,45	2					
O	318-00043	Cap, Tant 33µf 10V	C1	1					
P	318-00045	Cap, Tant 10µf 25V	C12,16, 20,24	4					
Q	318-00306	Cap, Tant 1µf 35V	C29,43	2					
R	320-00069	Cap, Mylar .018µf 1%	C36,51	2					
S	320-00084	Cap, Mylar 1.8µf 1%	C37,52	2					
T	311-00083	Cap, Mica, 1600pf 1%	C35,50	2					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE 8-17-77

ASSEMBLY NO. 401-28806

E.C.O. 79-006
82-004

DESCRIPTION DELAY AND WIDTH BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	335-00001	Choke, 1.5µh	L1-5	5					
B	335-00027	Choke, .15µh	L6	1					
C	335-00032	Inductor, .22µh	L7,8	2					
D	374-00064	Diode, 1N756A	CR17	1					
E	374-12529	Diode, 5V Zener	CR13-15	3					
F	335-00024	Inductor, 1µh (Miniature)	L9	1					
G	376-00022	Diode, 1N914B	CR7-12,18 26-31	13					
H	376-00079	Diode, HP2810	CR2-4, 19-22,32	8					
I	376-00107	Diode	CR5,6, 24,25	4					
J	376-11764	Diode	CR1,16,23	3					
K									
L	490-00041	Pad, Transistor	(Q14,49, 50,57)	4					
M									
N	551-00044	Potentiometer, 500Ω	R13	1					
O	551-00067	Potentiometer, 10K	R2,3,10,11	4					
P	551-00071	Potentiometer 500Ω	R4-9	6					
Q	551-00069	Potentiometer 100K	R1,12	2					
R	594-00111	Resistor, 110Ω, 1/8W, 5%	R229,230	2					
S	594-00027	Resistor, 2.7Ω 1/8W 5%	R69,184	2					
T	594-00036	Resistor 3.6Ω 1/8W 5%	R56,171	2					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE 8-17-77

ASSEMBLY NO. 401-28806

E.C.O. 78-026
82-004

DESCRIPTION DELAY & WIDTH BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	594-00091	Resistor 9.1Ω 1/8W 5%	R68,183	2					
B	594-00101	Resistor 100Ω 1/8W 5%	R57,172	2					
C	594-00240	Resistor 24Ω 1/8W 5%	R55,170	2					
D	594-00082	Resistor 8.2Ω 1/8W 5%	R227,228	2					
E	595-00100	Resistor 10Ω ½W 5%	R15,50, 225	3					
F	595-00101	Resistor 100Ω ½W 5%	R18,24, 42,44,48,						
G			49,52,58, 112,118,						
H			,163, 165, 173	13					
I	595-00102	Resistor 1K ½W 5%	R21,38,31. 74-82,91,						
J			93-98,108, 109,115,145.						
K			141,153,162 189-197,						
L			206,208-213 222,224	44					
M	595-00103	Resistor 10K ½W 5%	R63-66, 83-86,						
N			106,129,131 168,177-180						
O			198-201 219	21					
P	595-00104	Resistor 100K ½W 5%	R60,175	2					
Q	595-00105	Resistor 1M ½W 5%	R70-73 185-188	8					
R	595-00112	Resistor 1.1K ½W 5%	R102,217	2					
S	595-00121	Resistor 120Ω ½W 5%	R40,155	2					
T	595-00130	Resistor 13Ω ½W 5%	R62,181	2					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE 8-17-77

ASSEMBLY NO. 401-28806

E.C.O. 78-026
82-004

DESCRIPTION DELAY & WIDTH BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	595-00153	Resistor 15K ¼W 5%	R87-90, 202-205	8					
B	595-00220	Resistor 22Ω ¼W 5%	R67,182	2					
C	595-00271	Resistor 270Ω ¼W 5%	R61,176	2					
D	595-00182	Resistor 1.8K ¼W 5%	R17,25, 119,140	4					
E	595-00201	Resistor 200Ω ¼W 5%	R30,144	2					
F	595-00202	Resistor 2K ¼W 5%	R135-137, 139	4					
G	595-00222	Resistor 2.2K ¼W 5%	R167	1					
H	595-00240	Resistor 24Ω ¼W 5%	R32,146	2					
I	595-00241	Resistor 240Ω ¼W 5%	R128,130	2					
J	595-00270	Resistor 27Ω ¼W 5%	R34,147	2					
K	595-00301	Resistor 300Ω ¼W 5%	R124,161	2					
L	595-00302	Resistor 3K ¼W 5%	R20,114, 134,138	4					
M	595-00332	Resistor 3.3K ¼W 5%	R29,39, 143,154	4					
N	595-00392	Resistor 3.9K ¼W 5%	R92,207	2					
O	595-00510	Resistor 51Ω ¼W 5%	R41,122, 126,156,						
P			158	5					
Q	595-00511	Resistor 510Ω ¼W 5%	R103,218	2					
R	595-00512	Resistor 5.1K ¼W 5%	R132,133	2					
S	595-00560	Resistor 56Ω ¼W 5%	R54,123, 157,169	4					
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE 8-17-77

ASSEMBLY NO. 401-28806

E.C.O. 78-006
78-026

DESCRIPTION DELAY & WIDTH BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	595-00750	Resistor 75Ω ¼W 5%	R43,45,46 53,164,166	6					
B									
C	596-00301	Resistor 300Ω ½W 5%	R159	1					
D	596-00331	Resistor 330Ω ½W 5%	R59,174	2					
E	596-00431	Resistor 430Ω ½W 5%	R47	1					
F	596-00621	Resistor 620Ω ½W 5%	R125,160	2					
G	596-00751	Resistor 750Ω ½W 5%	R51	1					
H									
I	586-01001	Resistor 1K 1/8W 1% MF	R14,100, 107,105,						
J			127,215, 221,223	8					
K	586-02001	Resistor 2K 1/8W 1% MF	R16	1					
L	586-01002	Resistor 10K 1/8W 1% MF	R28,33,37, 142,148,						
M			226,	6					
N	586-03480	Resistor 348Ω 1/8W 1% MF	R19,113	2					
O	586-04990	Resistor 499Ω 1/8W 1% MF	R35,149	2					
P	586-01502	Resistor 15K 1/8W 1% MF	R99,101, 214,216,						
Q			104,220	6					
R	586-02002	Resistor 20K 1/8W 1% MF	R36,111, 150,152	4					
S	586-03920	Resistor 392Ω 1/8W 1% MF	R22,116	2					
T	586-03321	Resistor 3.32K 1/8W 1% MF	R23,117	2					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-28806

DESCRIPTION DELAY & WIDTH BOARD ASSEMBLY

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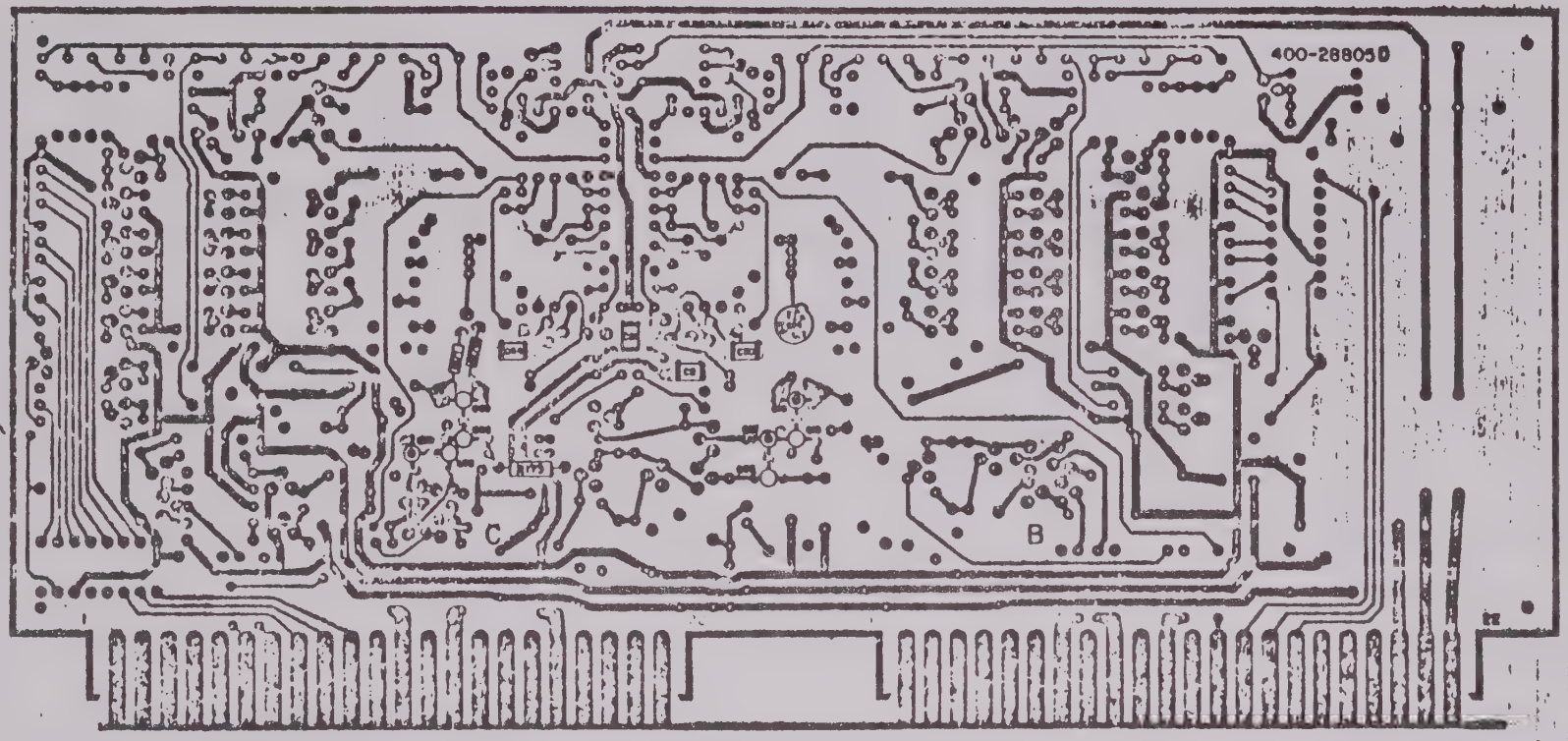
COPY DATE 8-17-77

E.C.O. 78-006
82-004

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	586-0511I	Resistor 5.11K 1/8W 1% MF	R110,151	2					
B	586-03571	Resistor 3.57K 1/8W 1% MF	R27,121	2					
C									
D	586-08450	Resistor 8450 1/8W 1% MF	R26,120	2					
E									
F	663-00070	Transistor 2N3904	Q1,5, 25-33,37,						
G			46,47, 68-76	23					
H	663-00071	Transistor 2N3906	Q2-4,6,7, 17-24,34-						
I			36,44,45, 48,56,						
J			60-67	28					
K	663-00112	Transistor MPS2369	Q8,11-13, 53-55	7					
L	663-11757	Transistor	Q9,10, 40-43	6					
M	663-19245	Transistor	Q15,16,38, 39,51,52,						
N			58,59	8					
O	663-11789	Transistor	Q49.50	2					
P	663-00188	Transistor, MM4049	Q14.57	2					
Q	665-00348	IC LM324	IC2	1					
R	665-00445	IC 74S138	IC1,3	2					
S									
T									



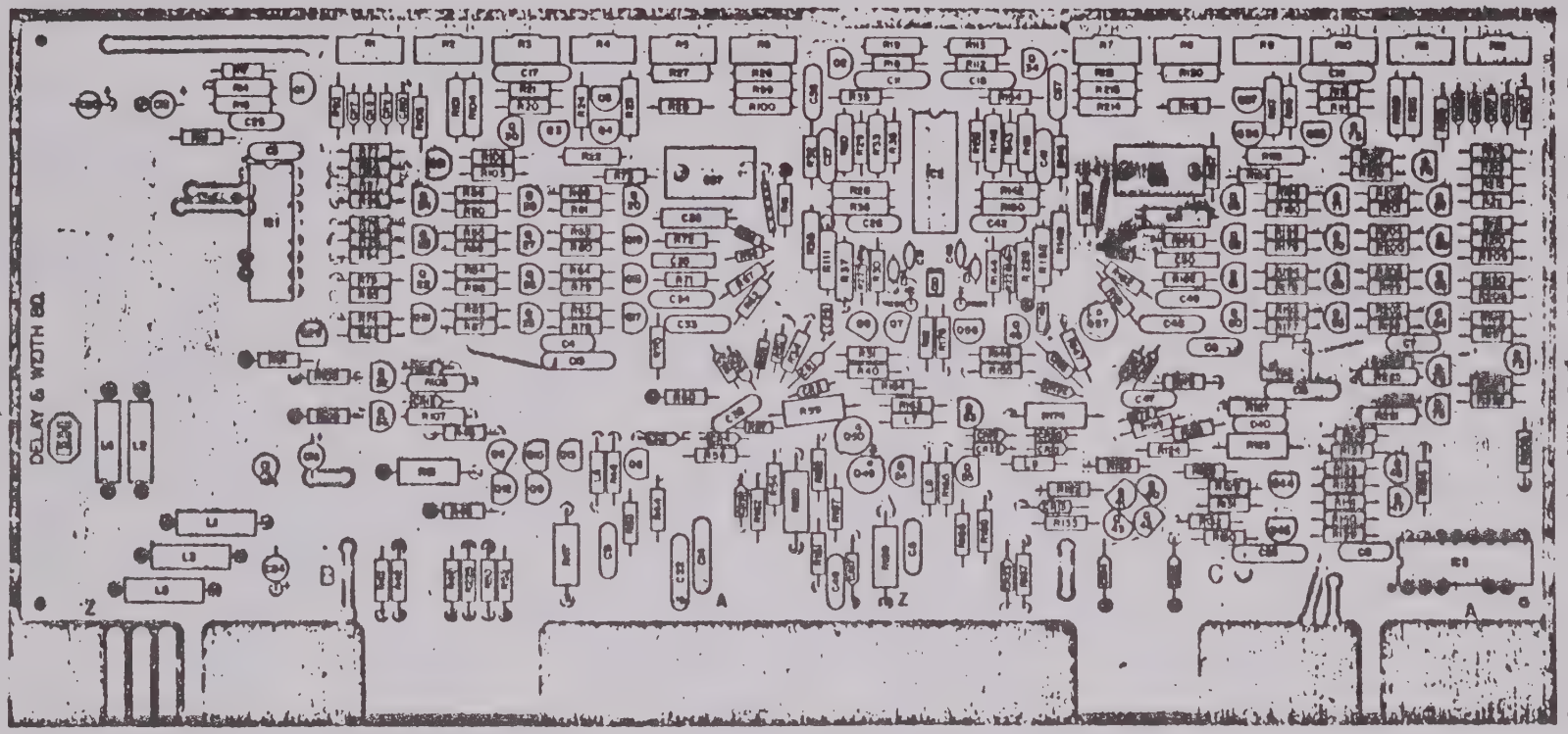
SHIELD TRANSFER PAD UNDER CAP.

CUT SHIELD LEAD FLUSH WITH CASE

044 - 288040 BOTTOM VIEW

ASSEMBLY DRAWING
DELAY & WIDTH BD

DRAWN	LCF	7-9-77	D-401-288038	D
CHECKED	JGT	7-9-77		
APPROVED			SHEET NO. 2 OF 3	



REF DWG'S

1	BOARD OUTLINE	
2	PARTS LOCATION DWG	400-28808
3	ASSY DWG	401-28806
4	SCHEMATIC DWG	410-28807

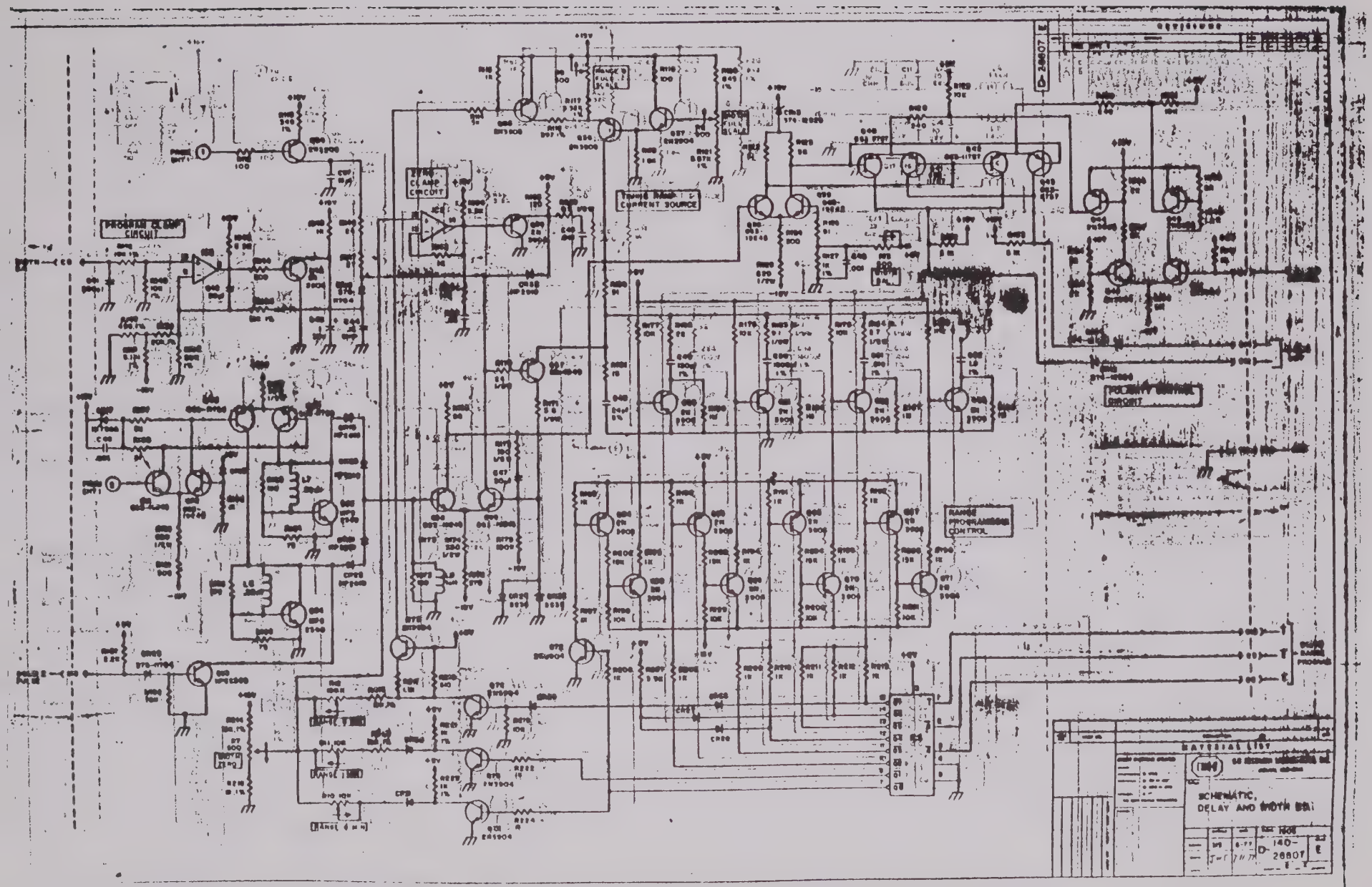
REVISIONS

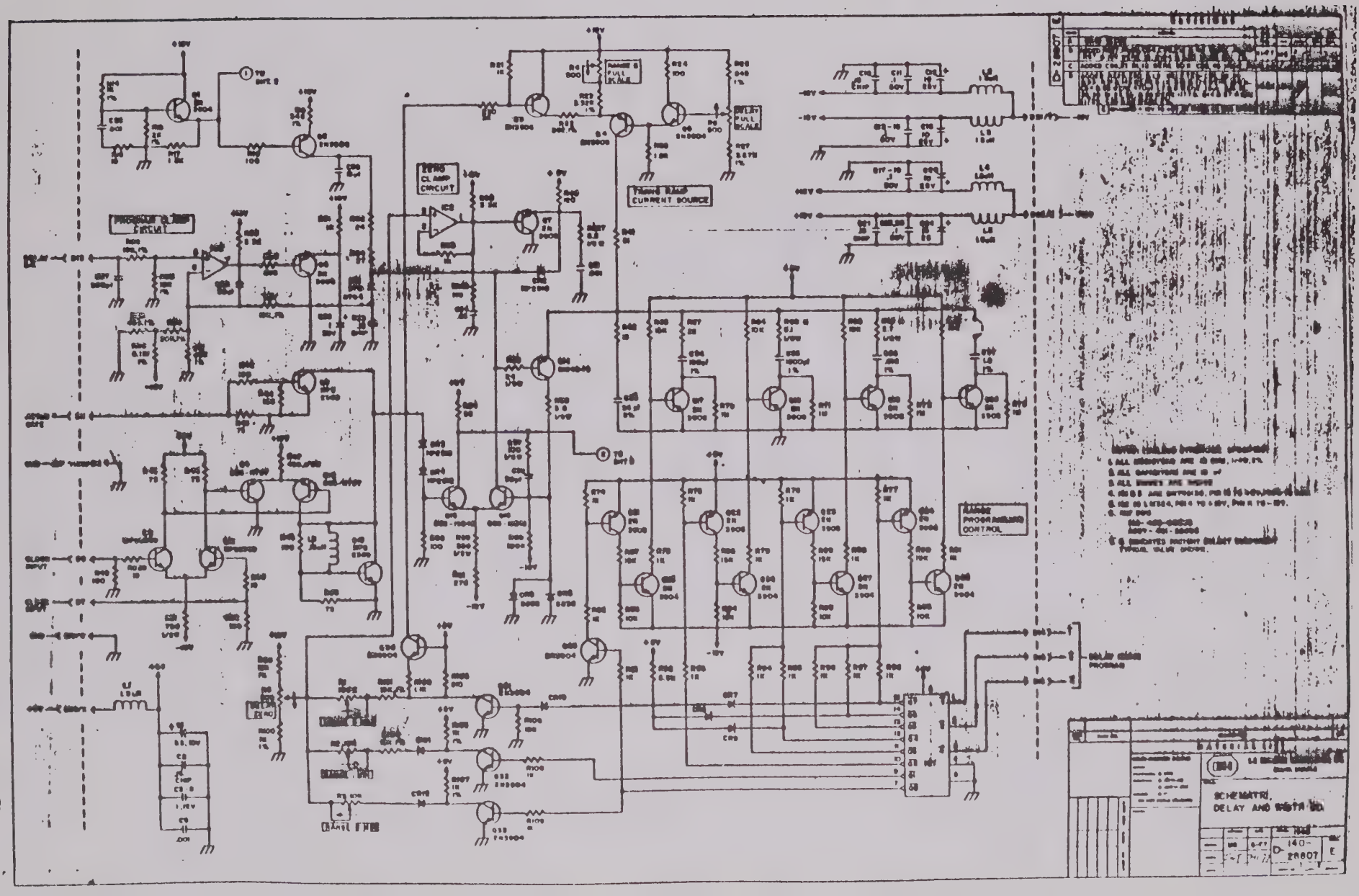
LTR	DESCRIPTION					
A	ORIGINAL RELEASE					
B	ADDED PART 270 CD4-95					
C						
D						

USED ON	QTY	NEXT ASSY
PROD	1	401-28806
PROD	1	401-28806
PROD	1	

IEH ASSEMBLY DRAWING
DELAY & WIDTH BD.

DRAWN	LCP	7-9-77	D-401-28806 D
CHK'D	JWT	7-9-77	
APPR'D			SHEET NO 1 OF 1


D-26807
ZERO CLAMP CIRCUIT
CURRENT SOURCE
RANGE PROGRAMMING CONTROL
SCHEMATIC, DELAY AND SWITCH BD.
D-140-26807


ZERO CLAMP CIRCUIT
PROGRAM CLAMP CIRCUIT
CURRENT SOURCE
DELAY PROGRAMMING CONTROL
SCHEMATIC, DELAY AND WIDTH BD.
140-2807

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-29639

DESCRIPTION POWER SUPPLY REGULATOR ASSEMBLY

B/M PAGE _____

COPY DATE 11-15-76

E.C.O. 82-007

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

EM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	400-29638	PC Board		1					
B	401-29639	Assembly Drawing	Prod Ref						
C	140-29640	Schematic	Prod Ref						
D									
E	311-00007	Cap, Cerm 100pf 1KV	C2,5,8,11	4					
F	311-00034	Cap, Mono .1µf 50V	C1,4,7,10	4					
G	311-00074	Cap, Cerm .01µf 100V	C13-24	12					
H	316-00062	Cap, El 15µf 50V	C3,6,9,12	4					
I									
J	374-12529	Diode,	CR1	1					
K	376-00034	Diode, 1N4005	CR2-18	17					
L	484-00079	Terminal	TP1-4	4					
M	595-00101	Resistor 100Ω ½W 5%	R1	1					
N	595-00102	Resistor 1K ½W 5%	R2	1					
O	595-00302	Resistor 3K ½W 5%	R16,22	2					
P	595-00752	Resistor 7.5K ½W 5%	R3,9	2					
Q									
R	610-00307	Resistor 1.5Ω 2W w.w.	R8,15, 21,27	4					
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

ASSEMBLY NO. 401-29639

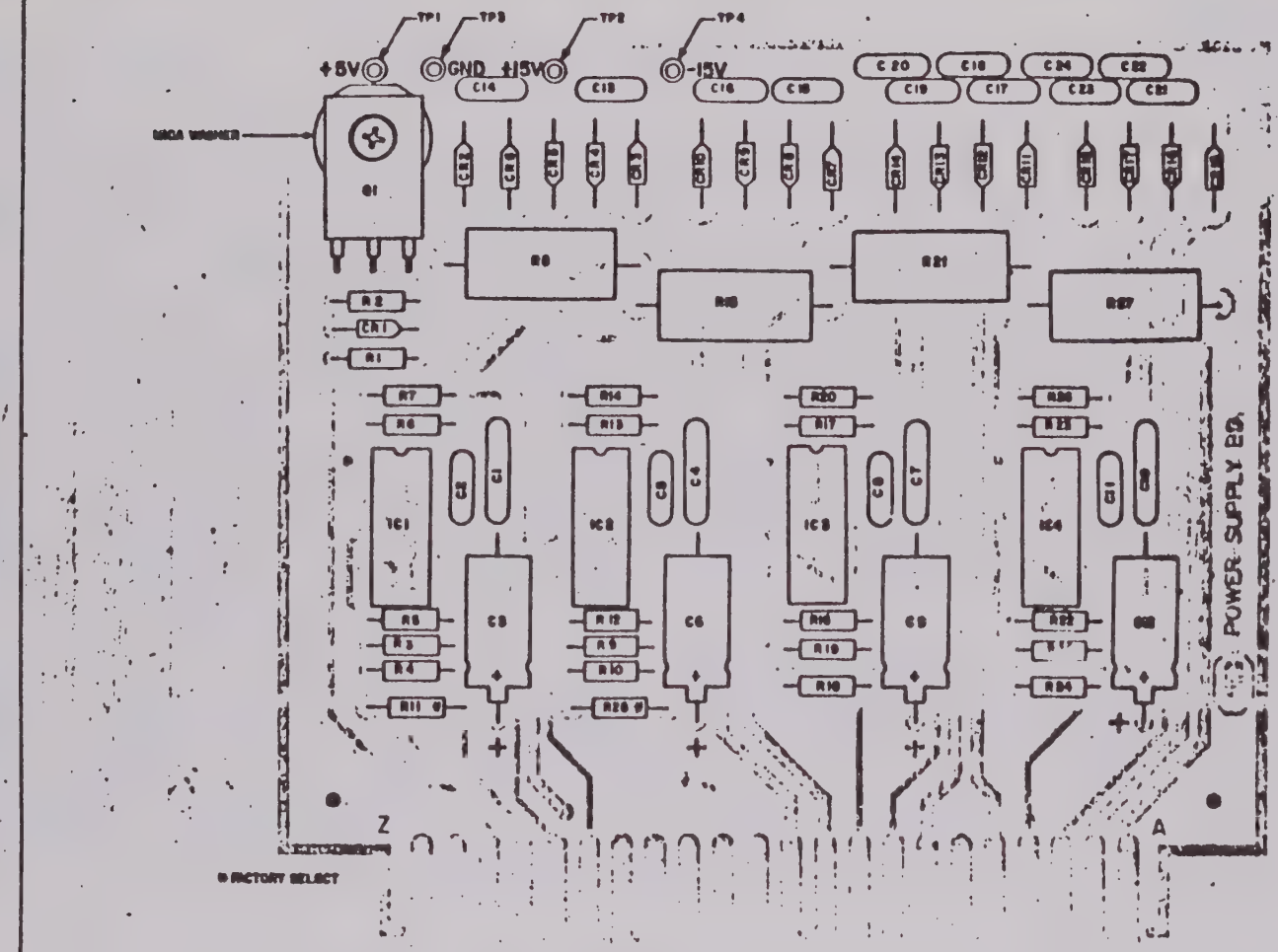
COPY DATE _____

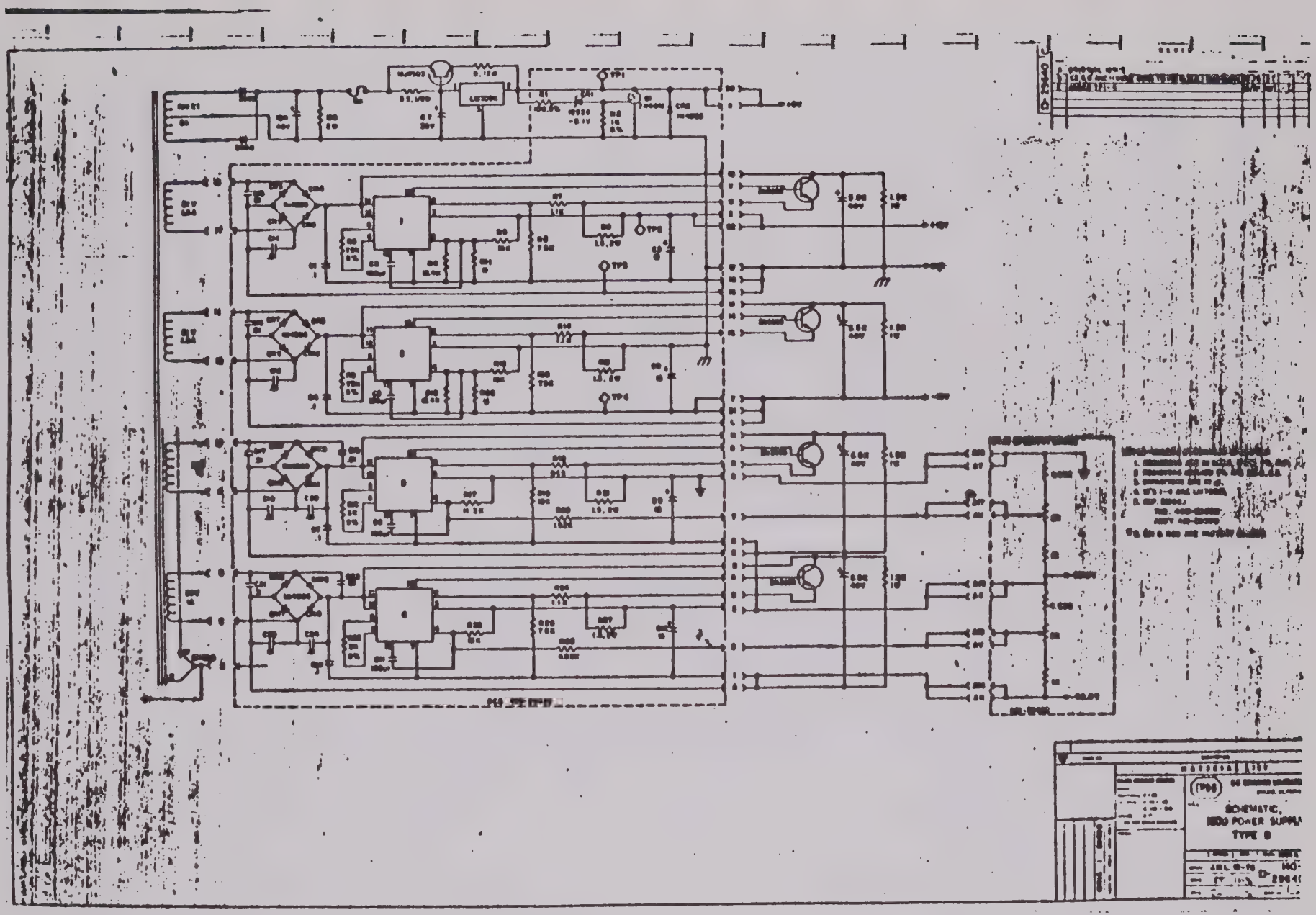
DESCRIPTION POWER SUPPLY REGULATOR ASSEMBLY

E.C.D. 78-013

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	586-04021	Resistor 4.02K 1/8W 1% MF	R26	1					
B	586-01542	Resistor 15.4K 1/8W 1% MF	R4,10	2					
C	586-01132	Resistor 11.3K 1/8W 1% MF	R17	1					
D	586-01502	Resistor 15K 1/8W 1% MF	R5,12,23	3					
E	586-01002	Resistor 10K 1/8W 1% MF	R19	1					
F	586-07501	Resistor 7.5K 1/8W 1% MF	R6,13,25	3					
G	586-01101	Resistor 1.1K 1/8W 1% MF	R7,14,24	3					
H	586-01821	Resistor 1.82K 1/8W 1% MF	R20	1					
I									
J	586-08450	Resistor 845Ω 1/8W 1% MF	R18	1					
K									
L	663-00131	Transistor 2N4441	Q1	1					
M									
N	665-00164	IC LM723N	IC1-4	4					
O									
P									
Q									
R									
S									
T									


TP1
TP3
TP2
TP4
+5V
GND
+15V
-15V
MICA WASHER
Q1
IC1
IC2
IC3
IC4
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
C18
C19
C20
C21
C22
C23
C24
R1
R2
R3
R4
R5
R6
R7
R8
R9
R10
R11
R12
R13
R14
R15
R16
R17
R18
R19
R20
R21
R22
R23
R24
R25
R26
R27
CR1
CR2
CR3
CR4
CR5
CR6
CR7
CR8
CR9
CR10
CR11
CR12
CR13
CR14
CR15
CR16
CR17
CR18
POWER SUPPLY BD.
Z
A
FACTORY SELECT
400-29638
140-29640
B C8,8,9 AND 11 WERE CONNECTED TO PINS 10,11,8 & 1 RESPECTIVELY
C ADDED TP1-4, A/B REVISION
1001 A
LOUDEN
10-26-76
11/76
401-29639
C



JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

ASSEMBLY NO. 401-30139

COPY DATE _____

DESCRIPTION CLOCK BOARD ASSEMBLY

E.C.O. 82-002

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	400-30138	PC Board		1					
B	401-30139	Assembly Drawing	Prod Ref						
C	140-30140	Schematic	Prod Ref						
D									
E	311-00001	Cap, Cerm 10pf 1KV	C39-42	4					
F	311-00002	Cap, Cerm 20pf 1KV	C45,49	2					
G	311-00005	Cap, Cerm 30pf 1KV	C44	1					
H	311-00009	Cap, Cerm 500pf 1KV	C36	1					
I	311-00020	Cap, Cerm .47µf 25V	C34,43,47,48	4					
J	311-00034	Cap, Cerm .1µf 50V	C7-11	5					
K	311-00041	Cap, Cerm .1µf 12V	C12-29 38,46	20					
L	311-00128	Cap, Mica, 27pf	C50	1					
M									
N	311-00074	Cap, Cerm .01µf 100V	C35	1					
O									
P	311-00342	Cap, Mica 20pf 5%	C37	1					
Q									
R	318-00043	Cap, Tant 33µf 10V	C1,4	2					
S	318-00047	Cap, Tant 10µf 35V	C2,3,5,6	4					
T	318-00050	Cap, Tant 1µf 35V	C30-33	4					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

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ASSEMBLY NO. 401-30139

COPY DATE _____

DESCRIPTION CLOCK BOARD ASSEMBLY

E.C.O. 82-002

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	335-00022	Choke, 1μh	L3-8	6					
B	335-00027	Choke, .15μh	L9	1					
C	*335-23309	Choke	L1,2	2	A				
D									
E	374-11761	Diode, Zener MP	CR1A,B	1					
F	376-00022	Diode 1N914B	CR8,9,11 13,14,17	6					
G	376-00079	Diode 2810	CR10,12 15,16	4					
H	376-00107	Diode, S835	CR2-5	4					
I	376-00700	Diode, MBD101	CR6,7	2					
J									
K	490-00004	Heat Sink	(Q25)	1					
L**	491-30164	Heat Sink Assy	(Q10,13)	1	A				
M	490-00041	Transistor Pad	(Q10-13)	4					
N	490-00045	Heat Sink	(IC1,2)	2					
O	490-00055	Heat Sink. 16 Pin	(IC14)	1					
P	495-80054	Socket. IC 16 Pin	(IC14)	1					
Q	496-00043	Transistor Pad	(Q25)	1					
R	551-00070	Potentiometer, 200Ω,72XW	R1	1					
S	551-00068	Potentiometer,100Ω, 72XW	R4	1					
T	551-00069	Potentiometer,100K, 72XW	R3	1					

* S/A File
** 1500 Series

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-30139

DESCRIPTION CLOCK BOARD ASSEMBLY

B/M PAGE _____

COPY DATE _____

E.C.O. 82-002

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	551-00072	Potentiometer 50Ω, 72XW	R2	1					
B	551-00074	Potentiometer 2K, 72XW	R5	1					
C									
D	586-01002	Resistor 10K 1/8W 1% MF	R58,60	2					
E	586-01003	Resistor 100K 1/8W 1% MF	R14	1					
F	586-01020	Resistor 102Ω 1/8W 1% MF	R52	1					
G	586-02001	Resistor 2K 1/8W 1% MF	R13	1					
H	586-02211	Resistor 2.21K 1/8W 1% MF	R30,39 55,57	4					
I	586-02371	Resistor 2.37K 1/8W 1% MF	R15	1					
J	586-03480	Resistor 348Ω 1/8W 1% MF	10	1					
K	586-03571	Resistor 3.57K 1/8W 1% MF	R47,49,56	3					
L	586-04020	Resistor 402Ω 1/8W 1% MF	R18,19,21 45,50	5					
M	586-051R1	Resistor 51.1Ω 1/8W 1% MF	R11	1					
N	586-04320	Resistor 432Ω 1/8W 1% MF	R9	1					
O	586-03320	Resistor 332Ω 1/8W 1% MF	R59	1					
P									
Q	586-07500	Resistor, 750Ω 1/8W 1%	R8	1					
R									
S	594-00510	Resistor, 51Ω, 1/8W, 5%	R130	1					
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

ASSEMBLY NO. 401-30139

DESCRIPTION CLOCK BOARD ASSEMBLY

B/M PAGE _____

COPY DATE _____

E.C.O. 82-002

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	595-00027	Resistor 2.7Ω ¼W 5%	R112,115, 118	3					
B	595-00100	Resistor 10Ω ¼W 5%	R16,20,32. 34,40,41,						
C			83,85	8					
D	595-00101	Resistor 100Ω ¼W 5%	R33,35,78- 82,86,87,						
E			89-92,94, 97,129	16					
F	595-00102	Resistor 1K ¼W 5%	R22,66,69, 75,88,122.						
G			123,127	8					
H	595-00104	Resistor 100K ¼W 5%	46	1					
I	595-00112	Resistor 1.1K ¼W 5%	R23,25	2					
J	595-00121	Resistor 120Ω ¼W 5%	R95,109	2					
K	595-00122	Resistor 1.2K ¼W 5%	R98	1					
L	595-00151	Resistor 150Ω ¼W 5%	R125	1					
M	595-00152	Resistor 1.5K ¼W 5%	R84	1					
N	595-00153	Resistor 15K ¼W 5%	R12	1					
O	595-00182	Resistor 1.8K ¼W 5%	R64,73,99	3					
P	595-00200	Resistor 20Ω ¼W 5%	R111,114, 117,131	4					
Q	595-00201	Resistor 200Ω ¼W 5%	R93	1					
R	595-00202	Resistor 2K ¼W 5%	R53,100	2					
S	595-00222	Resistor 2.2K ¼W 5%	R124,128	2					
T	595-00241	Resistor 240Ω ¼W 5%	R104	1					
	595-00204	Resistor 200K ¼W 5%	R28	1					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

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COPY DATE _____

ASSEMBLY NO. 401-30139

E.C.O. 82-002

DESCRIPTION CLOCK BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	595-00271	Resistor 270Ω ¼W 5%	R29,37,44, 48,105	5					
B	595-00272	Resistor 2.7K ¼W 5%	R54	1					
C	595-00331	Resistor 330Ω ¼W 5%	R24,26	2					
D	595-00361	Resistor 360Ω ¼W 5%	R42	1					
E	595-00432	Resistor 4.3K ¼W 5%	R17	1					
F	595-00510	Resistor 51Ω ¼W 5%	R104,106	2					
G	595-00511	Resistor 510Ω ¼W 5%	R96,126	2					
H	595-00560	Resistor 56Ω ¼W 5%	R63,72,102, 107	4					
I	595-00621	Resistor 620Ω ¼W 5%	R65,68,71, 74,77,120	6					
J	595-00680	Resistor 68Ω ¼W 5%	R103	1					
K	595-00681	Resistor 680Ω ¼W 5%	R62	1					
L	595-00682	Resistor 6.8K ¼W 5%	R61	1					
M	595-00750	Resistor 75Ω ¼W 5%	R27,38	2					
N	595-00820	Resistor 82Ω ¼W 5%	R31,36,113 116,119	5					
O	595-00911	Resistor 910Ω ¼W 5%	R67,70,76, 121	4					
P	595-00912	Resistor 9.1K ¼W 5%	R51	1					
Q									
R	596-00241	Resistor 240Ω ½W 5%	R108	1					
S	596-00271	Resistor 270Ω ½W 5%	R43	1					
T	596-00390	Resistor 39Ω ½W 5%	R110	1					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE _____

E.C.O.

ASSEMBLY NO. 401-30139

DESCRIPTION CLOCK BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	598-00560	Resistor 56Ω 2W 5%	R6,7	2					
B									
C	663-00070	Transistor 2N3904	Q2,3,17	3					
D	663-00071	Transistor 2N3906	Q1,4,14, 18,19	5					
E	663-00112	Transistor MPS 2369	Q8,15,16, 20-24,29	9					
F									
G	663-00186	Transistor MM8009	Q25	1					
H	663-00188	Transistor MM4049	Q10-13	4					
I	663-11757	Transistor	Q5-7,9, 26-28	7					
J									
K	665-00076	IC 7490	IC4-9	6					
L	665-00140	IC 74S133	IC3	1					
M	665-00157	IC MC10102	IC15,17	2					
N	665-00159	IC MC10107	IC19	1					
O	665-00214	IC MC10104	IC16	1					
P	665-00249	IC MC10116	IC18	1					
Q	665-00332	IC 74LS00	IC10-12	3					
R	665-00381	IC MC10137	IC14	1					
S	665-00445	IC 74LS138	IC13	1					
T	665-00456	IC LM307	IC20	1					

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED
1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

COPY DATE _____

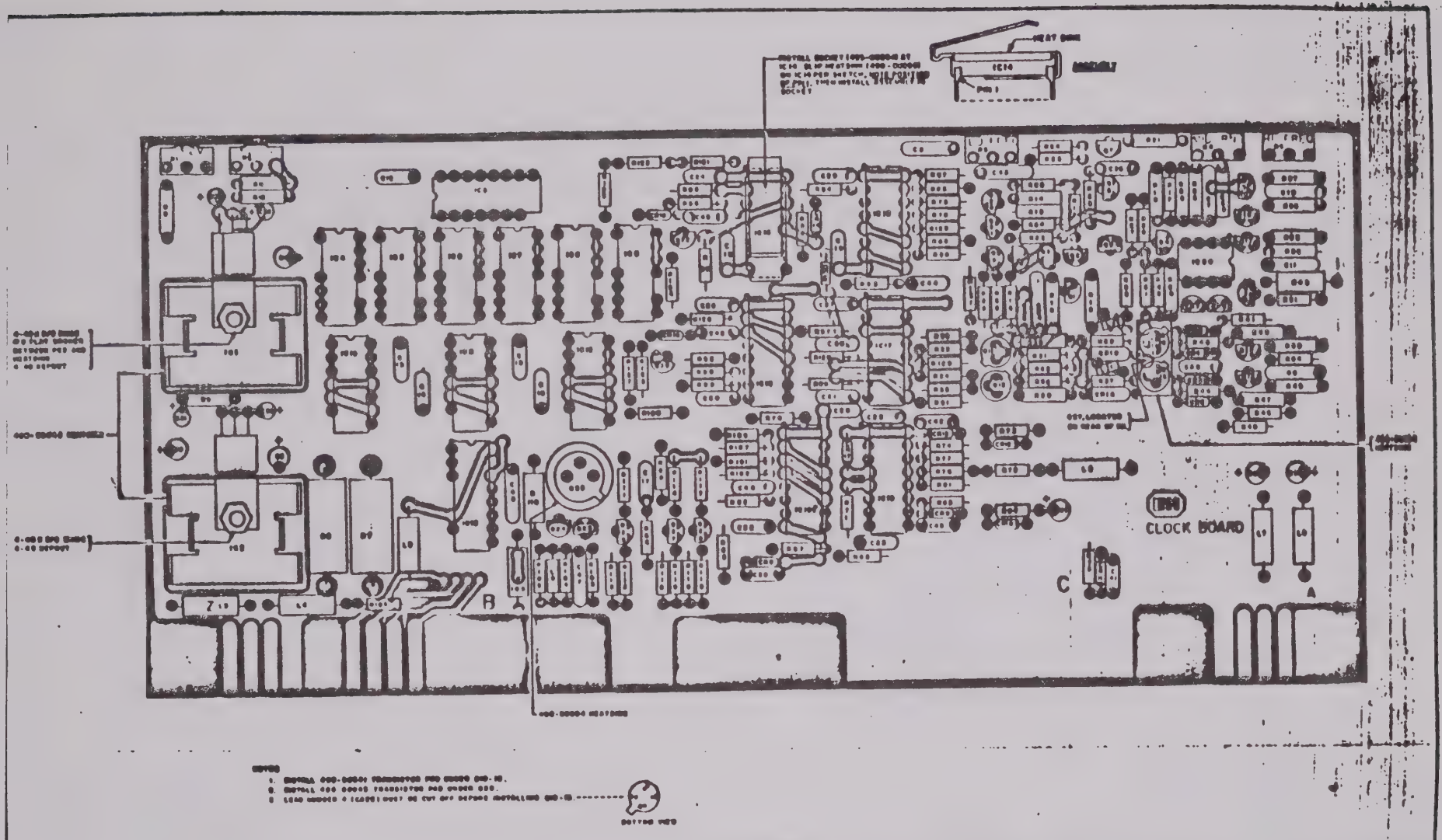
ASSEMBLY NO. 401-30139

E.C.O. 82-002

DESCRIPTION CLOCK BOARD ASSEMBLY

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	665-00479	IC 7905CT	IC2	1					
B	665-00482	IC 341-5.0	IC1	1					
C									
D									
E		-HARDWARE-							
F	202-00012	Screw 4-40x3/8 Philips BHMS (2)	Prod Ref						
G	240-00001	Kepnut 4-40 (2)	Prod Ref						
H	215-00022	Washer, Flat #6 (1)	Prod Ref						
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									



NOTES:
1. INSTALL [illegible] TRANSISTOR PER [illegible] SHT. 10.
2. INSTALL [illegible] RESISTOR PER [illegible] SHT.
3. LEAD MARKED [illegible] SHOULD BE CUT OFF BEFORE INSTALLING SHT. 10.

BOTTOM VIEW

REF DWG'S

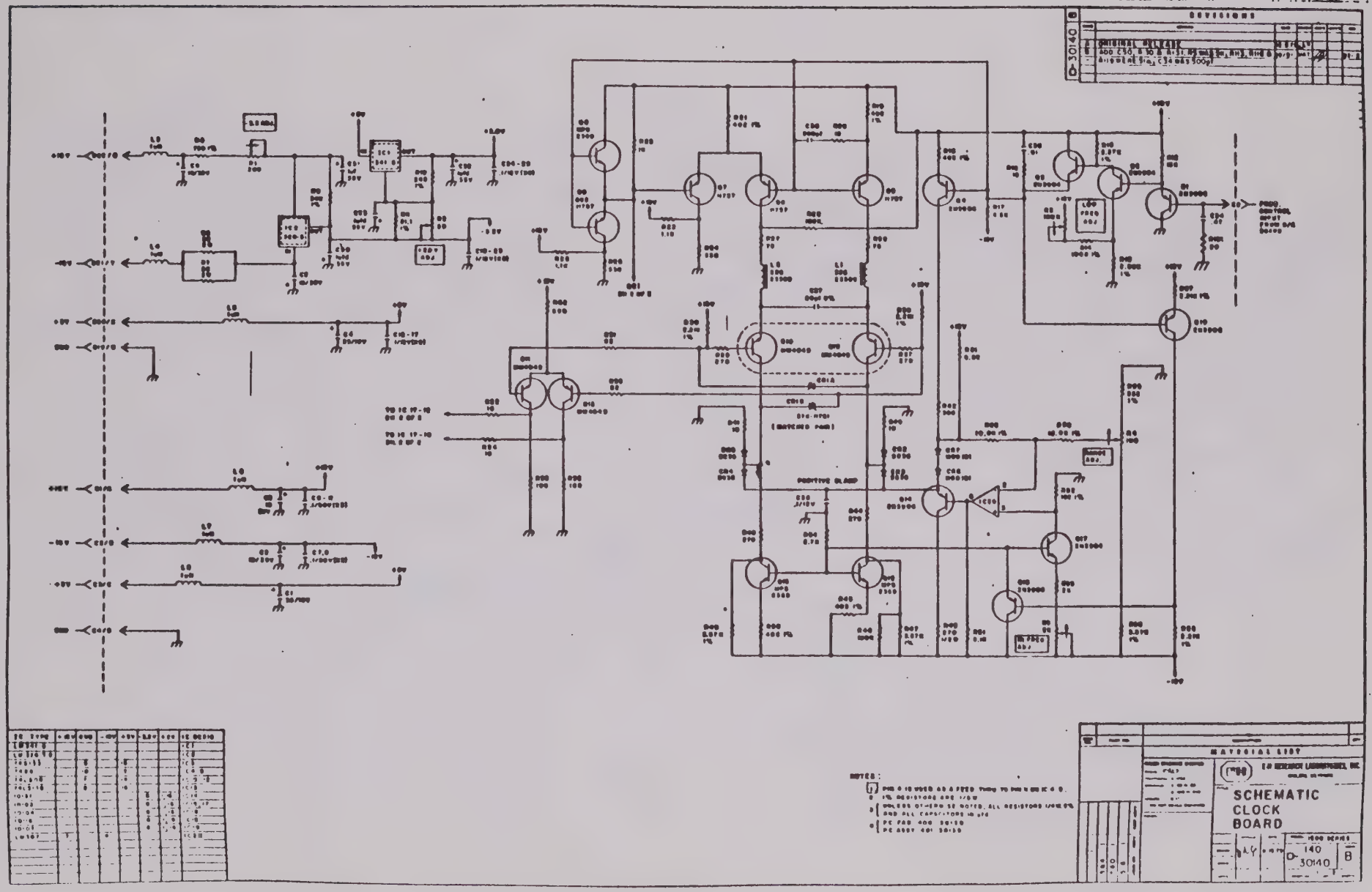
NOTE: ARTWORK REVISION C

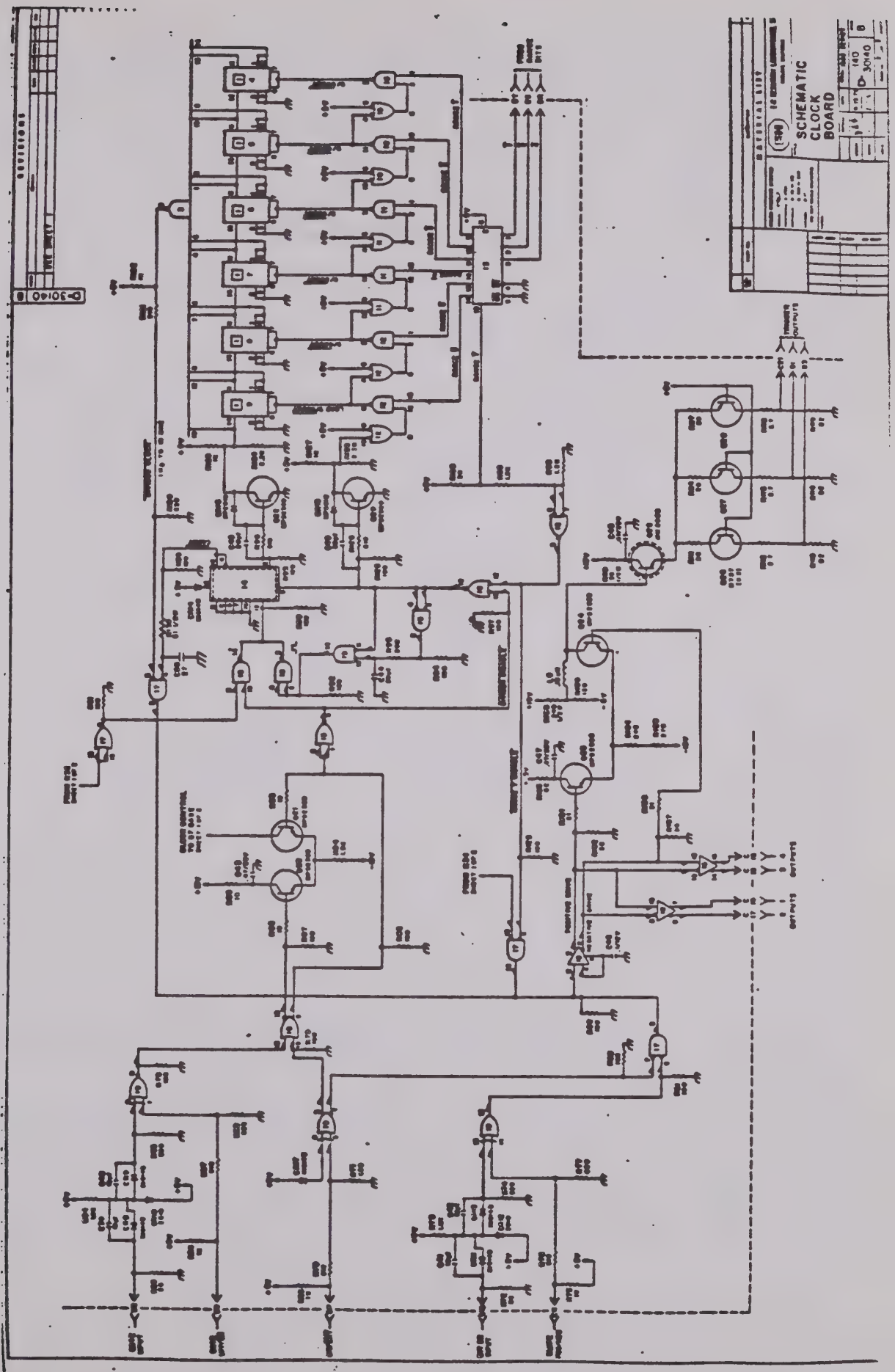
REVISIONS			
	DESCRIPTION		
A	ORIGINAL RELEASE		
B	[illegible]	[illegible]	
C	P/O B C/O CHANGES	7/84	

WHAT IS USED ON	REV	WHAT DOES IT
1910		
1900		
1900		

EH ASSY. DWG. CLOCK BOARD

MODEL NO.	TYPE SERIES		SIZE
DRAWN		D-401-30139	C
CHECKED			
APPROVED		SHEET NO. 1 OF 1	


SCHEMATIC
CLOCK
BOARD
D-30140
B


SCHEMATIC
CLOCK
BOARD

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED

1560

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE 8

ASSEMBLY NO. 401-30220

COPY DATE 3-31-81

DESCRIPTION INTERFACE P.C. ASSEMBLY

E.C.O. 81-025
83-005

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	400-30219	P.C. Board		1					
B	401-30220	Assembly Drawing	Prod Ref						
C	140-30221	Schematic	Prod Ref						
D									
E	311-00110	Cap, Cerm, .1µf, 16V	C4-12	9					
F	311-00007	Cap, Cerm, 100nf, 1KV	C13	1					
G	318-00009	Cap, Tant, 15µf, 20V	C1-3	3					
H									
I	495-00082	IC Socket, 40 Pin	XIC12	1					
J	495-00103	IC Socket, 28 Pin	XIC13	1					
K									
L	595-00102	Resistor, 1K, ¼W, 5%	R1	1					
M									
N									
O									
P	589-00472	Res Ntwk, 4.7K,10 Comm. pin SIP	RP1	1					
Q									
R	639-00046	Thumbwheel Switch. PC Mt.	S1	1					
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED

1560

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE 9

ASSEMBLY NO. 401-30220

COPY DATE 3-31-81

DESCRIPTION INTERFACE P.C. ASSEMBLY

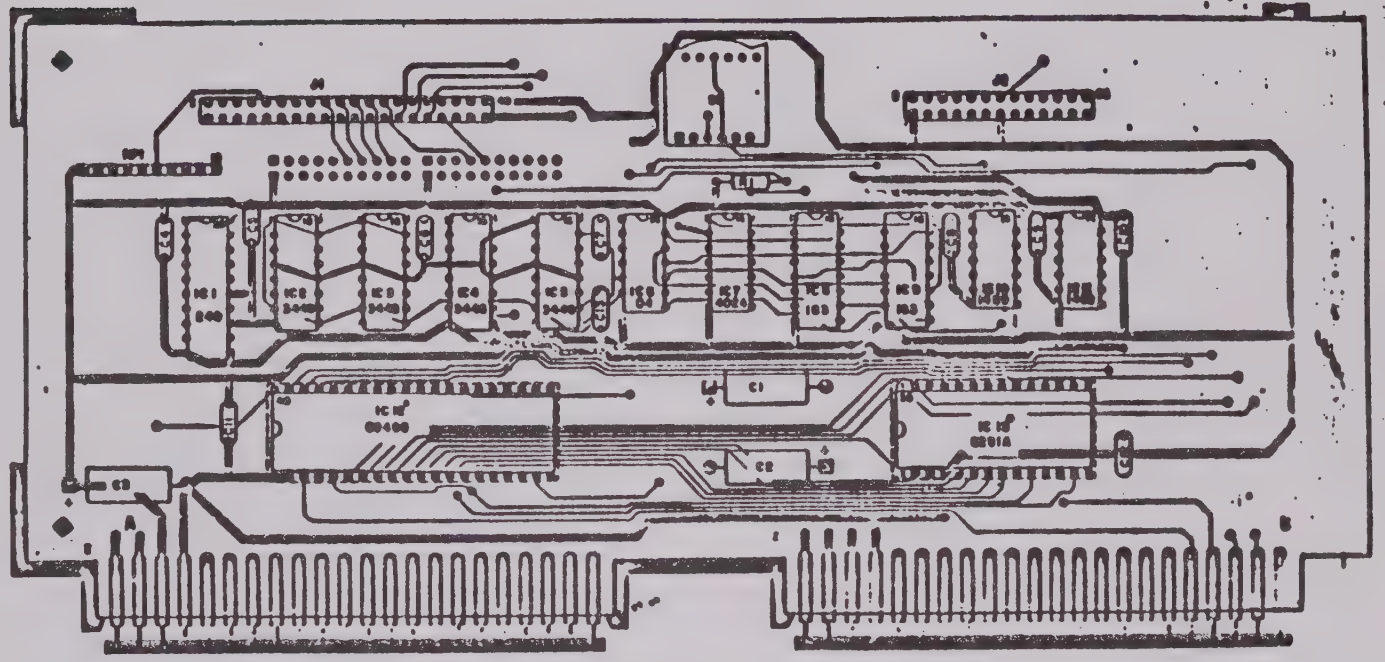
E.C.O.

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	665-00334	IC, 74LS04	IC6	1					
B	665-00371	IC, 1488	IC11	1					
C	665-00372	IC, 1489	IC10	1					
D	665-00396	IC, 74LS163	IC8,9	2					
E	665-00489	IC, 3448	IC2-5	4					
F	665-00496	IC, 74LS240	IC1	1					
G									
H	666-00080	IC, 4024B	IC7	1					
I									
J	700-00280	Conn, 40 Pin Header	J1	1					
K	700-00361	Conn, 26 Pin Header	J2	1					
L									
M	850-30342	Special Handling Assembly	IC12,13	1	A				
N	147-21818	Spec: MOS Programming &							
O		Handling Procedures	Prod Ref						
P									
Q									
R									
S									
T									

REVISIONS					
LTR	DESCRIPTION				
A	ORIGINAL RELEASE	—	—	—	—
B	ADD C13, DELETE RP8-9	10/28	MAY		

COMPONENT SIDE



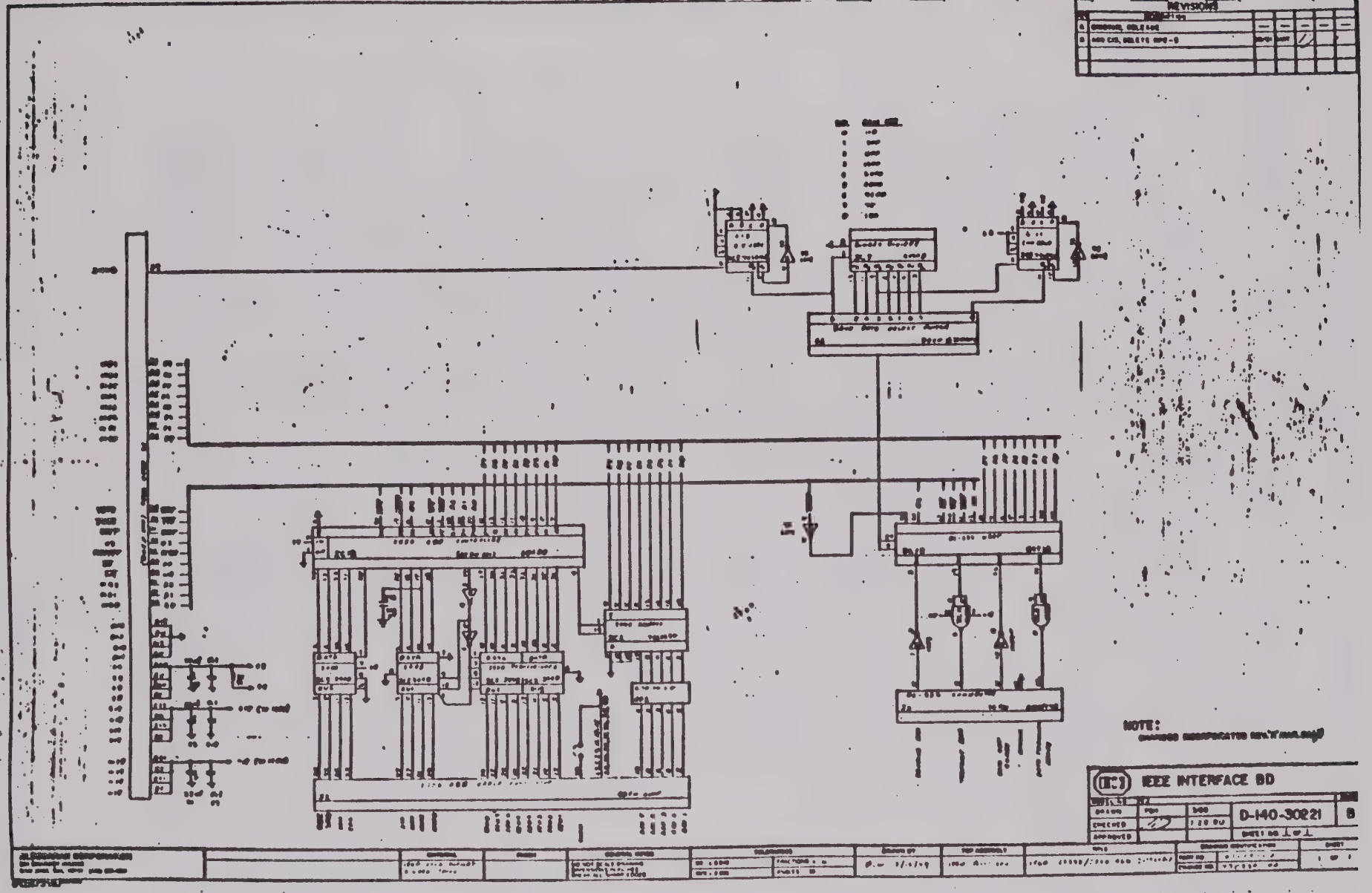
NOTES:
1. INSTALL 22 SOCKETS FOR IC'S 18 & 19
IC'S ARE PART OF 030-30848 INSTALLED AT LATER ASSY.

REF. DWG'S

1. SCHEMATIC DWG: 140-30201
2. FAB SPEC DWG: 401-30219

ARTWORK REV 'D'

IEEE INTERFACE BD				
DRAWN	[illegible]	[illegible]	C-401-30220	B
CHECKED	[illegible]	[illegible]		
APPROVED			SHEET NO. 1 OF 1	


REVISIONS
NOTE:
IEEE INTERFACE BD
D-140-30221
B

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	DATE

WHERE USED
1504
1560
1564
(1500 Series)

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

ASSEMBLY NO. 401-29660

COPY DATE 1-17-77

DESCRIPTION TYPE D OUTPUT BOARD ASSEMBLY

E.C.O. 79-025
82-003

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	400-29659	PC Board		1					
B	401-29660	Assembly Drawing	Prod Ref						
C	140-29661	Schematic	Prod Ref						
D	060-29757	Alignment Tool (Q37,62)	Prod Ref						
E									
F	311-00005	Cap, Cerm 30pf 1KV	C1,10	2					
G	311-00006	Cap, Cerm 50pf 1KV	C54	1					
H									
I									
J	311-00010	Cap, Cerm .001µf 1KV	C2,4,5,37, 45,51-53	8					
K	311-00017	Cap, Cerm .002µf 1KV	C18	1					
L	311-00034	Cap, Mono .1µf 50V	C16,26, 44, 57	4					
M	311-00042	Cap, Cerm .004µf 1KV	C3	1					
N	311-	Cap, Cerm, Factory Select (1)	C19						
O	311-00074	Cap, Cerm .01µf 100V	C36,47-50	5					
P	311-00097	Cap, Mica 56pf 5%	C11	1					
Q	311-00098	Cap, Mica 620pf 1%	C9	1					
R	312-14971	Cap, Chip 390pf	C13	1					
S	312-14972	Cap, Chip .1µf	C12,15, 24,25,38	5					
T	312-14974	Cap, chip .01µf	C14	1					

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A	318-00005	Cap, Tant 10µf 20V	C27,28,35	3					
B	318-00038	Cap, Tant 5.6µf 35V	C34,40	2					
C	311-00112	Cap, Cerm. .022µf, 25V	C56	1					
D	318-00045	Cap, Tant 10µf 25V	C29-31,55	4					
E	320-00074	Cap, Mylar..075pf 2%	C7	1					
F	320-00076	Cap, Mylar .75pf 2%	C6	1					
G	326-00026	Cap, Poly 6750pf 1%	C8	1					
H	332-00010	Cap, Vari, 2.5-9pf	C43	1					
I									
J	335-00022	Choke, 1µh	L17-19,21	4					
K	*335-10956	Choke Assembly	L1,3	2	A				
L	*335-19184	Choke Assy, 20T,3D3	L13,14	2	A				
M	*335-14686	Choke Assy, 5T 4C4	L2,4,10, 12	4	A				
N	*335-17303	Choke Assy, 10% 3E2A	L11	1	A				
O**	*335-24784	Choke Assy	L16	1	A				
P									
Q									
R	361-00012	Core, 4C4	L5(T2)	1					
S									
T	374-00037	Diode, 1N759A	CR56,57,61	3					

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EM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	374-00044	Diode, 1N749A	CR11	1					
	374-00073	Diode, 1N3791A	CR51	1					
C	374-11733	Diode, 1N759A MP	CR12A,B	1					
D	374-11761	Diode, 12529 MP	CR7A,B	1					
	374-12529	Diode, Zener	CR22	1					
F	374-00108	Diode, 1N5247B	CR9	1					
	376-00022	Diode, 1N914B	CR1-6,8, 10,13-21,						
H			23-28, 32-41						
			43-46	37					
J	376-00031	Diode, 1N270	CR47-50	4					
K	376-00034	Diode, 1N4005	CR52-54	3					
	376-00079	Diode, 5082-2810	CR42,58-60	4					
M	376-22925	Diode, MBD101 Sel	CR29-31	3					
	450-00064	Test Jack	TP1-3	3					
Q	490-00020	Heat Sink	(Q27)	1					
	490-00041	Transistor Pad	(Q57,58)	2					
	490-00045	Heat Sink	R129,Q83)	2					
R	490-00046	Heat Sink	(Q26)	1					
	490-00048	Heat Sink	(Q28,59,60)	3					
T	490-00050	Heat Sink	(Q42,43)	1					

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	490-16574	Heat Sink Plate	(Q26)	1					
B	490-17026	Heat Sink	(Q37,62)	1					
C	490-17108	Heat Sink Plate	(Q37,62)	1					
D	490-23128	Heat Sink Plate	(R129,Q83)	2					
E	496-00029	Transistor Pad	(Q12,28,29, 54,59,60)	6					
F									
G									
H									
I									
J	551-00032	Potentiometer 500 89PR	R86	1					
K	551-00038	Potentiometer 2K 89PR	R201,204	2					
L	551-00034	Potentiometer 20K 89PR	R230	1					
M	551-00068	Potentiometer 1000 72XW	R71	1					
N	551-00073	Potentiometer 1K 72XW	R55	1					
O	551-00074	Potentiometer 2K 72XW	R7,31	2					
P	551-00075	Potentiometer 50K 72XW	R25,34,65	3					
Q	551-00076	Potentiometer 500K 72XW	R57,216	2					
R	551-00088	Potentiometer 2000 AB 5V	R235	1					
S									
T									

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	584-00018	Relay, Zestron 226-12-1A	K5	1					
B	584-00019	Relay, Hi-G	K1-4,6	5					
C									
D	594-00039	Resistor 3.9Ω 1/8W 5%	R164	1					
E	594-00051	Resistor 5.1Ω 1/8W 5%	R246	1					
F	594-00056	Resistor 5.6Ω 1/8W 5%	R75	1					
G	594-00103	Resistor 10K 1/8W 5%	R218	1					
H	594-00200	Resistor, 20Ω, 1/8W, 5%	R247-249	3					
I	594-00560	Resistor, 56Ω, 1/8W, 5%	R95,110,111	3					
J	594-00750	Resistor 75Ω 1/8W 5%	R117,118	2					
K									
L	595-00027	Resistor 2.7Ω ½W 5%	R8	1					
M	595-00036	Resistor 3.6Ω ½W 5%	R44,47	2					
N	595-00100	Resistor 10Ω ½W 5%	R40,60,72, 120,125,						
O			214	6					
P	595-00102	Resistor 1K ½W 5%	R59,83,91, 102,103,						
Q			105,154, 155,169						
R			242	10					
S	595-00103	Resistor 10K ½W 5%	R21,37,92, 156-158,						
T			166-168, 209	10					

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	595-00105	Resistor 1M ¼W 5%	R162,163, 211	3					
B	595-00104	Resistor 100K ¼W 5%	R33	1					
C	595-00124	Resistor 120K ¼W 5%	R56	1					
D	595-00152	Resistor 1.5K ¼W 5%	R41	1					
E	595-00200	Resistor 20Ω ¼W 5%	R61,62	2					
F	595-00201	Resistor 200Ω ¼W 5%	R9	1					
G	595-00202	Resistor 2K ¼W 5%	R78,84,104 206,222, 228	6					
H									
J	595-00203	Resistor 20K ¼W 5%	R10,93, 219,236	4					
?	595-00222	Resistor 2.2K ¼W 5%	R14,19,150	3					
K	595-00223	Resistor 22K ¼W 5%	R223-225	3					
-	595-00271	Resistor 270Ω ¼W 5%	R58,165	2					
M	595-00300	Resistor 30Ω ¼W 5%	R66,127	2					
?	595-00302	Resistor 3K ¼W 5%	R101	1					
P	595-00330	Resistor 33Ω ¼W 5%	R42,43	2					
?	595-00332	Resistor 3.3K ¼W 5%	R5	1					
?	595-00333	Resistor 33K ¼W 5%	R11,12,49	3					
R	595-00361	Resistor 360Ω ¼W 5%	R73,74	2					
?	595-00362	Resistor 3.6K ¼W 5%	R76	1					
T	595-00390	Resistor 39Ω ¼W 5%	R63	1					

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	595-00391	Resistor 390Ω ¼W 5%	R174,178, 208	3					
B	595-00392	Resistor 3.9K ¼W 5%	R79	1					
C									
D	595-00471	Resistor 470Ω ¼W 5%	R191-194, 207	5					
E									
F	595-00510	Resistor 51Ω ¼W 5%	R15,17,18, 99,215	5					
G	595-00511	Resistor 510Ω ¼W 5%	R84,100, 245	3					
H	595-00560	Resistor 56Ω ¼W 5%	R112	1					
I	595-00563	Resistor 56K ¼W 5%	R23,35	2					
J	595-00620	Resistor 62Ω ¼W 5%	R183,186, 188,190, 237	5					
K									
L	595-00680	Resistor 68Ω ¼W 5%	R77	1					
M	595-00683	Resistor 68K ¼W 5%	R147-149 151-153	6					
N	595-00821	Resistor 820Ω ¼W 5%	R239	1					
O	595-00822	Resistor 8.2K ¼W 5%	R69	1					
P	595-00910	Resistor 91Ω ¼W 5%	R64	1					
Q	595-00911	Resistor 910Ω ¼W 5%	R213,217	2					
R	595-00512	Resistor 5.1K ¼W 5%	R121,175, 240, 244	4					
S									
T									

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	596-00102	Resistor 1K ¼W 5%	R180	1					
B	596-00121	Resistor 120Ω ¼W 5%	R113	1					
C	596-00122	Resistor 1.2K ¼W 5%	R16	1					
D	596-00202	Resistor 2K ¼W 5%	R108	1					
E	596-00390	Resistor 390 ¼W 5%	R182,184, 187,189,						
F			238	5					
G	596-00681	Resistor 680Ω ¼W 5%	R170-173	4					
H									
I	597-00102	Resistor 1K 1W 5%	R181	1					
J	598-00131	Resistor 130Ω 2W 5%	R210	1					
K	607-00005	Resistor 50Ω 15W 1%	R129	1					
L	610-00019	Resistor 100 3W w.w.	R179	1					
M	610-00079	Resistor 3300 3W w.w.	R45	1					
N									
O	586-04993	Resistor 499K 1/8W 1% MF	R227	1					
P	586-04990	Resistor 499Ω 1/8W 1% MF	R82	1					
Q	586-04750	Resistor 475Ω 1/8W 1% MF	R85	1					
R	586-01502	Resistor 15K 1/8W 1% MF	R90	1					
S	586-09531	Resistor 9.53K 1/8W 1% MF	R88	1					
T	586-05621	Resistor 5.62K 1/8W 1% MF	R176	1					

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	586-09091	Resistor 9.09K 1/8W 1% MF	R200	1					
B	586-01620	Resistor 162Ω 1/8W 1% MF	R32	1					
C	586-03321	Resistor 3.32K 1/8W 1% MF	R3	1					
D									
E	586-03571	Resistor 3.57K 1/8W 1% MF	R30	1					
F	586-01001	Resistor 1K 1/8W 1% MF	R24,38,54, 106,202, 205	6					
G									
H	586-02001	Resistor 2K 1/8W 1% MF	R22,36,53	3					
I	586-04021	Resistor 4.02K 1/8W 1% MF	R203,225	2					
J	586-04991	Resistor 4.99K 1/8W 1% MF	R29	1					
K	586-01002	Resistor 10K 1/8W 1% MF	R2,13,20, 26,39,80, 81,87 229, 243	10					
L									
M	586-02002	Resistor 20K 1/8W 1% MF	R28,48,51, 58,233	5					
N	586-01101	Resistor 1.1K 1/8W 1% MF	R177	1					
O	586-08061	Resistor 8.06K 1/8W 1% MF	R4,6	2					
P	586-01622	Resistor 16.2K 1/8W 1% MF	R1	1					
Q	586-02491	Resistor 2.49K 1/8W 1% MF	R52	1					
R	586-01912	Resistor 19.1K 1/8W 1% MF	R212	1					
S	586-01000	Resistor 100Ω 1/8W 1% MF	R70	1					
T	587-01211	Resistor 1.21K 1/8W 1% MF	R107	1					

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	588-03650	Resistor 365Ω ¼W 1% MF	R128	1					
B									
C									
D	619-00006	Resistor 25.5Ω 1W MS220	R89,109, 119,124,						
E			232,234	6					
F	619-00007	Resistor 51Ω 1W 1% MS210	R122,123	2					
G	621-00008	Resistor 10Ω ¼W 1%	R96-98, 114-116	6					
H	622-00050	Resistor 75Ω 2W 1% MS220	R130,134	2					
I	622-00051	Resistor 150Ω 2W 1% MS220	R135,136	2					
J	622-00052	Resistor 93.1Ω 2W 1% MS220	R131-133	3					
K	622-00053	Resistor 165Ω 2W 1% MS220	R137-142, 145,146	8					
L	622-00054	Resistor 82.5Ω 2W 1% MS220	R143,144	2					
M	622-00059	Resistor 360Ω 2W 1% MS220	R126	1					
N									
O	*651-12570	Transformer	T1	1	A				
P	*651-19186	Transformer Balun	T2	1	A				
Q									
R	663-00070	Transistor 2N3904	Q3,6,10,13 14,17,22,						
S			30,36,40, 45,48,53						
T			61,63-66 73-75	23					

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A	663-00071	Transistor 2N3906	Q1,2,4,5, 11,16,20,						
B			23,32,34, 41,44,46,						
C			47,52,67-72,82,						
D			88,89	24					
E	663-00106	Transistor 2N4919	Q21,26,43	3					
F	663-00107	Transistor 2N4923	Q42,83	2					
G	663-00108	Transistor 2N5841	Q27,50,51	3					
H	663-00186	Transistor MM8009	Q28,59,60	3					
I									
J	663-00129	Transistor 2N4403	Q76-79	4					
K	663-00130	Transistor 2N5086	Q9,15,49	3					
L	663-00134	Transistor 2N5089	Q31	1					
M	663-00197	Transistor 2N5670	Q33,35	2					
N	663-11724	Transistor	Q12,29	2					
O	663-11725	Transistor	Q54	1					
P	663-11757	Transistor	Q18,19,55, 56	4					
Q	663-11780	Transistor	Q37,62	2					
R	663-00201	Transistor, 2N5769	Q57,58	2					
S	663-11789	Transistor	Q7,Q8	2					
T									

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ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	665-00080	IC MC74145P	IC1	1					
B	665-00332	IC SN74LS00N	IC2	1					
C	665-00339	IC SN74LS153N	IC4	1					
D	665-00348	IC LM324N	IC5	1					
E	665-00420	IC SN74LS01N	IC3	1					
F									
G	*704-23138	Output Cable Assy	J108	1	A				
H									
I	715-23086	Connector, Strip Line		1					
J									
K	721-00035	Connector, SMB PC Mt Jack	J1,2	2					
L									
M									
N									
O									
P									
Q									
R									
S									
T									

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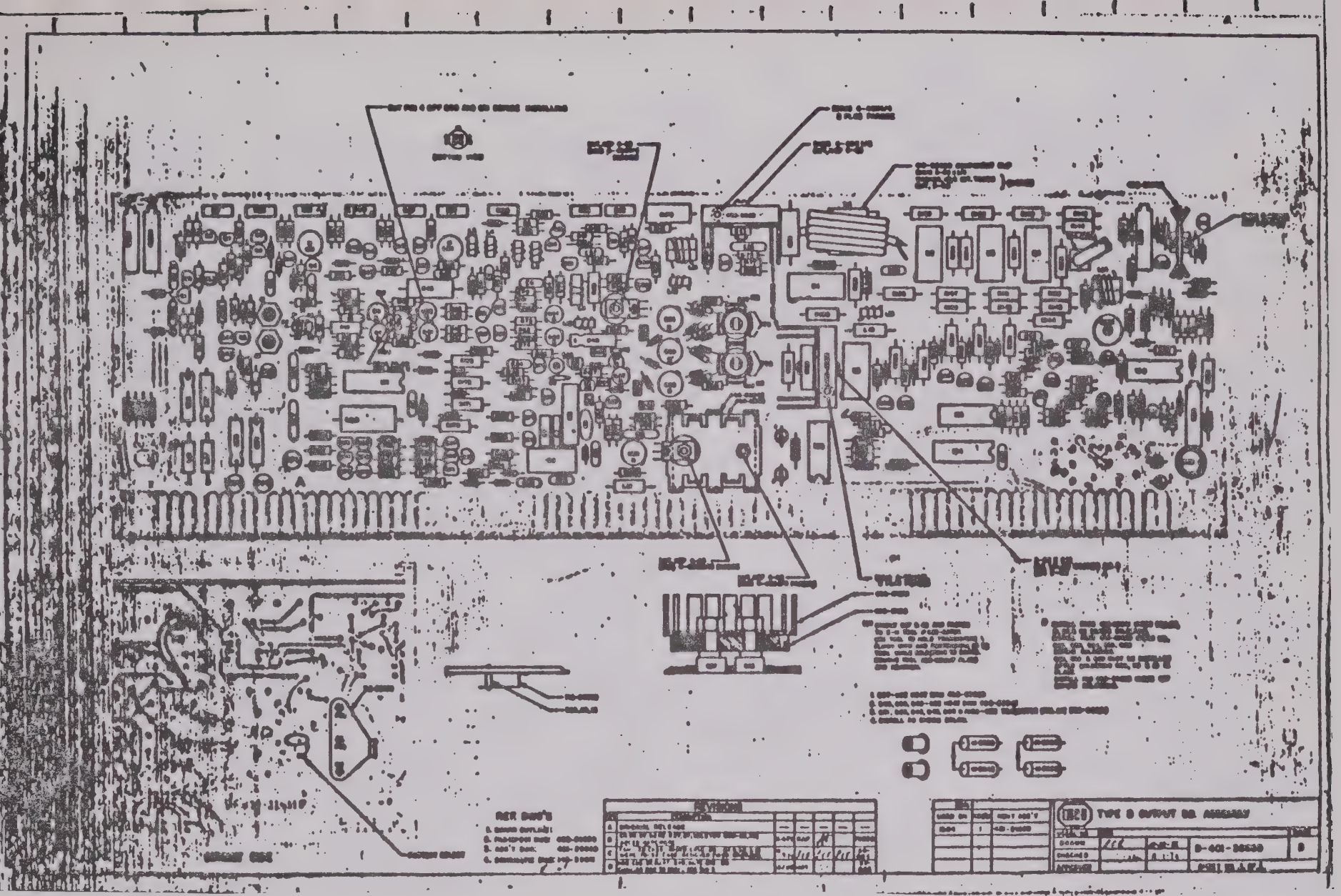
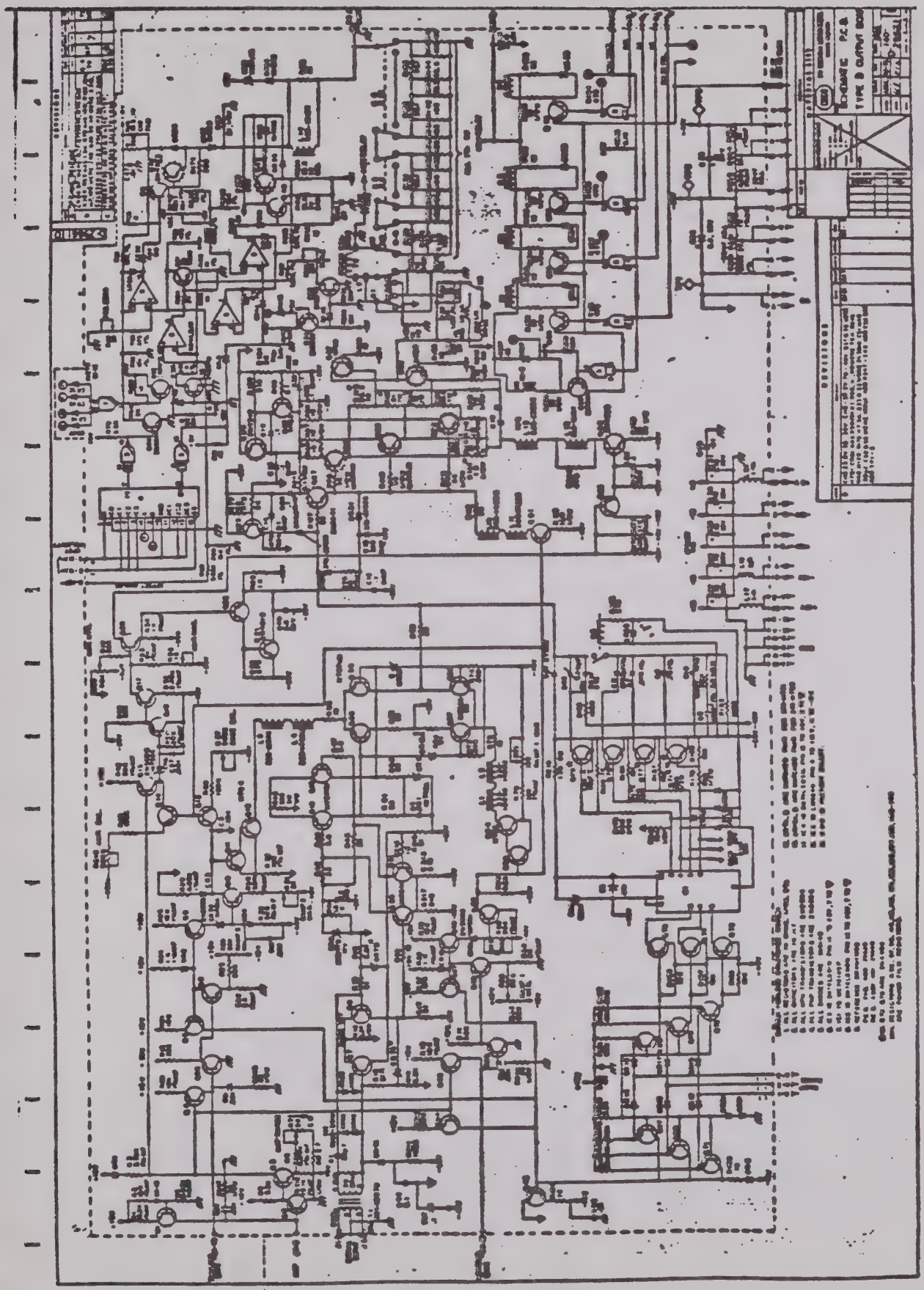
ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A		-HARDWARE-							
B	200-000	Screw 2-56x5/8 BHMS (1)	Prod Ref						
C	202-00006	Screw 4-40x¼ BHMS (5)	Prod Ref						
D	202-00012	Screw 4-40x3/8 BHMS (1)	Prod Ref						
E	202-00019	Screw 4-40x⅛ BHMS (2)	Prod Ref						
F	202-00061	Screw 4-40x9/16 BHMS (1)	Prod Ref						
G	215-00001	Washer, #2 Int Tooth (1)	Prod Ref						
H									
I	240-00001	Kepnut, 4-40 (6)	Prod Ref						
J	240-00005	Nut, 2-56 (1)	Prod Ref						
K	410-00020	Component Clip (1)	Prod Ref						
L	496-00022	Transistor Pad (1)	Prod Ref						
M	496-00029	Transistor Pad (6)	Prod Ref						
N	500-00009	Transistor Mtg Kit (6)	Prod Ref						
O									
P									
Q									
R									
S									
T									





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A	148-07917	1560/1564 Manual		1					
B	800-00032	Envelope		1					
C									
D	786-00020	Power Cord		1					
E									
F	146-26354	Documentation List	Prod Ref						
G									
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC NO

WHERE USED

1560

INDEX ☐ ASSEMBLY ☐ SPEC. ASSEM. ☐

ASSEMBLY NO. 821-30368

DESCRIPTION OPTIONAL ACCESSORIES

B/M PAGE 11

COPY DATE 3-31-81

E.C.D.

FILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	*350-21924	Chassis Slide Kit		A					
B									
C	706-00001	GPIB Cable - 2M							
D									
E	*891-21925	Extender Board Kit		A					
F									
G									
H									
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

*S/A File

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED

1560

INDEX ☐ ASSEMBLY ☐ SPEC. ASSEM. ☐

B/M PAGE 12

COPY DATE 3-31-81

ASSEMBLY NO. 822-30369

E.C.O.

DESCRIPTION MODIFICATION OPTIONS LIST

LED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	QT. ASSEM	ISSUED	UNIT COST	UNIT	EXTENSION	SHORT
A	*350-21710	Mod Kit, Bench Inst.		A					
C	**350-21915	Mod Kit, GR Output Conn.		A					
	**350-21979	Mod Kit, Burst Mode		A					

*S/A File
**1500 File

JOB NO.	ASSEMBLIES REQ'D	COST CENTER	MAT'L. REC. No.

WHERE USED

1500 Series

INDEX ☐ ASSEMBLY ☒ SPEC. ASSEM. ☐

B/M PAGE _____

ASSEMBLY NO. 825-30456

COPY DATE 2-17-82

DESCRIPTION COMPLETION MATERIALS

ECO

ILLED BY _____ DATE _____ RELEASED TO _____ DATE _____

ITEM	ASSEMBLY OR PART NO.	DESCRIPTION	SCHEMATIC REF.	Q.T. ASSEM	ISSUED	UNIT COST	UNIT	EXTEN-SION	SHORT
A	276-16959	Label, "117V"		1					
B									
C	276-16960	Label, "234V"	Prod Ref						
D	276-16998	Label, "100V"	Prod Ref						
E	276-10098	Serial Tag (1)	Prod Ref						
F	276-21806	Label, "220V"	Prod Ref						
G									
H	398-00002	Fuse, 2A, S.B. (220V, 234V)	Prod Ref						
I									
J									
K									
L									
M									
N									
O									
P									
Q									
R									
S									
T									

	START	STOP
BAD	.02	.02
Good